

Intelligent Biology.

Global strategy amidst the globe's cultures:

Cultures in individual cognition, states and the global system

Nicholas D. Wright

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About the author

Dr Nicholas Wright is affiliated with Georgetown University, University College London (UCL), Intelligent Biology and New America. He combines neuroscientific, behavioural and technological insights to understand decision-making in politics and international confrontations, in ways practically applicable to policy. He regularly works with Governments. He has numerous academic and general publications. He received a medical degree from UCL, a BSc in Health Policy from Imperial College London, has Membership of the Royal College of Physicians (UK), has an MSc in Neuroscience and a PhD in Neuroscience both from UCL.

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EXECUTIVE SUMMARY

How can the US make global strategy in a world both vast and rich with cultural diversity? This matters: the US shaped the global system more than any other power since 1945, and that system hugely benefited the US and much of the globe. Whoever leads the global system's next epoch will accrue those benefits – and make the world more or less free. I examine two aspects of this challenge.

First, how can US policymakers make *global strategy*? The globe is vast, with some 193 countries, 4 billion internet users, 7000 languages, and 100 million Amazon Alexas.

'Global strategy' involves important activities and interests in all the continents that contain a significant fraction of the world's population. It isn't just grand strategy, which any state can have. It isn't just international strategy: the global system differs from the sum of its nations, because of transnational societal networks and domains like global finance or cyber. Three defining US conflicts were global: both World Wars and the Cold War.

Recommendations:

- (1) **Adopt a global mindset.** Policymaking should include a global vantage point.
- (2) **Use global system effects, not just actor-specific effects.** The US may most decisively influence China, for instance, via actions with Russia, global finance or Japan.

Second, how should strategy consider global *cultural diversity*? Culture is the ideas, customs, and social behaviour of a human group and reflects 'how things are done around here.' Many disciplines study culture (e.g. cross-cultural cognition and business, strategic, or political cultures) – and all of them find it slippery to define and measure. I integrate these largely disconnected fields into a mutually reinforcing framework.

I also conduct two deep dives on culture:

Culture in the individual's mind and brain: I systematically reviewed thousands of cognitive science papers comparing decision-making in East Asia and the West. I found: (1) for most aspects of choice no robust evidence shows cultural differences (e.g. risk or fairness); (2) some differences are often discussed but lack any clear testing (e.g. East Asians care more about "face"); and (3) some aspects of choice do consistently differ, e.g. East Asians tend to engage in more *context-dependent* processing than Westerners, by attending more to a salient object's relationship with its context.

Next I asked if these cognitive differences relate to *strategic thinking*. I compared *China and the US using empirical data from doctrine, elite opinion (including interviews in China) and extant scholarship*. Context-dependence, for instance, helps explain different representations of deterrence, offense and defense.

Recommendations:

- (1) **Apply a framework integrating cultural insights from multiple disciplines** in order to anticipate both (a) competitors' decision-making, and (b) how to influence the global swing states crucial to success in global grey zone competition.
- (2) **Cultural commonalities between the world's humans greatly outweigh differences, but specific differences—e.g. context dependence—can provide operationalizable tools** to cause intended, and avoid unintended, effects.

REPORT OVERVIEW

Global strategy is the art of creating power. This report's three parts help policymakers create power in a globe both vast and rich with cultural diversity:

- Part I examines global strategy and the globe's cultures;
- Part II examines culture in the individual's mind and brain;
- Part III examines cognitive differences and Chinese and US strategic culture.

This report is one of a coherent family of products that together provide a framework for successful influence in the Grey Zone. Other products examine principles for influence in the Grey Zone (2019), as well as in Grey Zone competition involving Outer Space (Wright, 2019), North Korea (Wright, 2018) and Artificial Intelligence (Wright, 2018). All are available at www.intelligentbiology.co.uk.

PART I GLOBAL STRATEGY AND THE GLOBE'S CULTURES

Part I asks how US policymakers can make *global* strategy. To answer, I break the challenge down into four parts and devote a chapter to each: What does *global* mean? A history of *global confrontations* since 1492. How can US policymakers *make global strategy*? Getting to grips with *culture globally*.

Chapter 1 Making global strategy

I define '**global**' as meaningfully involving all the world's continents on which significant fractions of the world's population live. It is a scale in the organization of human life. Figure S.1 shows other significant scales. We can now coherently deal with uses of this prefix 'global.' These include 'global system,' 'global order,' 'global-isation,' 'global confrontation,' or 'global strategy.'

The **global system** is a system-of-systems covering the whole of human society across all the world's continents on which significant fractions of the world's population live, and its key sub-systems include:

- states (e.g. the US or China),
- highly globalised subsystems (e.g. the global financial system or the UN), and
- systems at other scales (e.g. sub-state regions like Catalonia; or above the state like the competing Cold War liberal and Communist international systems).

The global system isn't a thin crust sitting atop states – it is the system-of-systems *incorporating* all the way from the global down to the local scale and to human individuals (Fig. S.2). States are themselves systems-of-systems. We

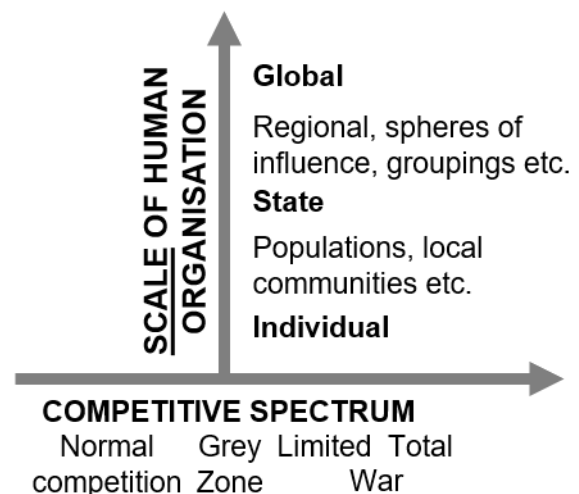


Figure S.1 Two factors: Scale (individual to global), and the competitive spectrum.

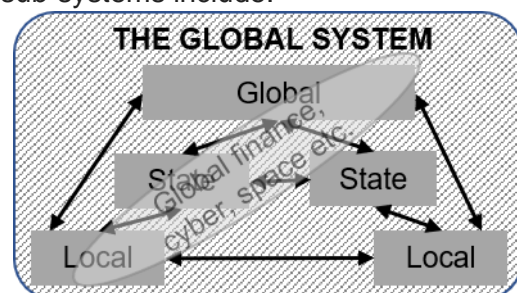


Figure S.2 The global system is a system-of-systems.

need four lenses to characterise the global system, to analyse its *political, social, cultural* and *economic* faces.

Global order is the *political* face of the global system—i.e. a political system-of-systems covering all of human society on all continents on which significant fractions of the world's population live—and it includes: (1) social institutions around which actors' expectations converge; and (2) the distribution of power amongst key subsystems in the global system, which include (a) states, (b) international subsystems, and (c) systems at other scales.

Globalisation is a shift in the relative amount of influence that the global system's different scales exert on the lives of humanity's individuals, and specifically an increase in the degree that those lives are global. It occurs, often not simultaneously, along all four faces.

Chapter 2 Global confrontations: A history since 1492

A **global confrontation** is one that meaningfully involves all the world's continents on which significant fractions of the world's population live.

I examine cases from around 1500 when sustained transoceanic links really brought the Americas into the global system. I identify and examine global confrontations, their emergence and 'dog's that didn't bark' (confrontations that could have been, but weren't, global). For much of the period I focus on the European powers (and offshoots like the US) as the sole transoceanic actors. Along the competitive spectrum (Fig. S.1), I include Grey Zone confrontations and wars.

Whilst numerous histories of conflict exist, the novelty here is to break this half millennium down by how *global* confrontations were. Three epochs emerge:

- 1500-1753 European powers grew their transoceanic links;
- 1754-1939 the Seven Years' War began an epoch of Eurocentric global confrontations;
- 1939-present World War Two saw the first Great Power from neither Europe nor its offshoots—Japan—play a central role.

Surprisingly, I find only **four clear cases of global confrontation: the Seven Years War (1754-1763), the two World Wars and the Cold War.**

From a global perspective, four central lessons emerge:

LESSON ONE The increasingly global character of great power confrontations is not new, has been ongoing for half a millennium and we can anticipate its continued increase.

LESSON TWO A clear trend shows the increasing involvement of great power protagonists that are not European (or European offshoots like the US) in global confrontations – but does that matter? Answering this relies on the potential importance of culture, examined in Chapter 4, Part II and Part III.

LESSON THREE Global system effects matter—properties of the global system not necessarily just the confrontation's main protagonists—and in particular look out for '**third parties**' that end up the real winners. Britain, for instance, benefited mightily from its global strategy for some two hundred years – until when it fought Germany in World War One it spent its money with third parties (the US and Japan) who won the most.

LESSON FOUR Whether or not a global strategy is worth pursuing depends on whether or not the global dimension pays. What determines this includes: the presence of third parties; the relative balance of the 'Continental' and 'global' legs of strategy; the ability to restrain oneself; and loopholes in a blockade.

Chapter 3 Making global strategy

Strategy is the art of creating power. Power consists of the ability to influence another's choice or to exert control by removing their capability to choose. In Chapter 1 I defined **'global'** as meaningfully involving all the world's continents on which significant fractions of the world's population live. Thus, in our contemporary world, any state can, if they desire, have some kind of global strategy with at least a global dimension. But what global strategy *can* mean for states differs markedly depending on their capability.

A **superpower** by definition has global reach, and is essentially a great power on every continent, or a **'global great power.'** Only Britain, the US and Soviet Union have been clear superpowers – and the US is the sole post-Cold War superpower. Only superpowers (i.e. now only US) can conduct a **global great power strategy**, which I define as *conducting strategy that involves important multi-domain activities and interests in all continents that contain a significant fraction of the world's population.* A superpower's strategy is different.

'Global' is not captured by existing scales for strategy. US doctrine, for instance, includes a commonplace framework with 'tactical, operational and strategic' levels of war, but the strategic level need not always be global for the US and most often can't be even for powerful states like Russia or China. 'Grand strategy' is something any state can have—e.g. Greece can have a grand strategy—but is rarely global except for a superpower. Nor is 'global' synonymous with the highest of the 'levels of analysis' in many academic disciplines, e.g. in economics macro-economics need not mean global, whilst in international relations when Lichtenstein and Austria interact it's international but clearly not global.

Implications:

- (1) Global strategy should be a distinct perspective, which differs from the 'strategic/operational/tactical' levels or 'grand strategy.'
- (2) US policy has previously acted successfully on the global system to achieve its desired global scale effects—e.g. both World Wars and the Cold War—and can do so again.
- (3) China is becoming a global great power—a superpower—and short of a severe Chinese domestic collapse the US cannot prevent it.¹ The US must decide how to manage global competition if it wants to continue reap the benefits of global US leadership. China would be the first superpower competitor from a culture outside Europe or its offshoots (the US and USSR) – if, and specifically how, that cultural difference might matter is examined in Chapter 4 and Parts II and III.

Four recommendations US policymakers when making global strategy:

(1) *Adopt a 'global mindset':* Global isn't just the sum of regional or functional (e.g. cyber) or state-level challenges – and 'global' should be a key perspective taken when making strategy. Methods include: Internal branding and senior "global champions" to get analysts into the

¹ China will likely become a superpower in the next 20 years or so, although that doesn't mean it will be more powerful than the US. The Soviet Union was a superpower less powerful than the US for much of the Cold War.

habit of think globally, and seeing global challenges and opportunities. Enhance global expertise by creating more roles that are global in scope, including within regional centres (e.g. EUCOM) and functional centres (e.g. STRATCOM). Create networks connecting regional offices (e.g. formal and informal ‘buddy’ schemes).

(2) *Harness ‘global system effects’, not just actor-specific effects:* The global system is a system-of-systems whose interconnections can cause intended and unintended effects. Harness indirect effects. The US may most decisively influence China, for instance, via actions with Russia, global finance or Japan.

(3) *The US domestic system’s characteristics crucially drive US global influence – and buttressing US domestic resilience is key.* Artificial Intelligence driven global competition between digital domestic political regimes illustrates this imperative (Wright, 2018). The US *model* influences swing states, allies and adversaries who may emulate or avoid its model. The US domestic system also provides data for others—allies, swing states and adversaries—to assess US capabilities and intentions.

(4) *Global strategy requires both a global ‘script’ and focal expertise.* The ‘Great Game’ in Central Asia was fought by the vast nineteenth century British and Russian Empires – but also required detailed local knowledge. So too today. Global strategy today requires US analysts to put themselves in the shoes of key audiences: competitors like China or Russia; allies like the UK or Japan; and swing states. Putting oneself in the shoes of others across the vast globe is tough and requires practical tools. One potentially crucial dimension is the richness of global cultural diversity – but does that rich cultural diversity actually matter and, if so, how? The next chapter describes how to make the slippery concept of ‘culture’ tractable – and sets up the deep dives in Parts II and III.

Chapter 4 Cultures and global strategy

In this chapter I ask: **how should strategy consider global cultural diversity?**

I define culture as the ideas, customs, and social behaviour of a human group and reflects ‘how things are done around here.’

I crafted this definition from across the many diverse disciplines that study culture across the different scales of human life from individual cognition to the global scale. Figure S.3 shows a number of these disciplines, and for each of eight fields I considered the empirical (rather than just theoretical) work and asked:

- **What is culture?** Culture is *slippery* to define and measure in all disciplines. My simple definition above captures key features but is broad enough to accord with most fields. Culture also has a crucial *cognitive dimension* across all eight scales studied.
- **Does culture matter and, if so, in what specific ways?** In some disciplines such as cross-cultural cognition the answer is ‘sometimes’, as Part II of this reports describes. In other fields the answer is ‘perhaps’ – an example of this being studies of states’ ‘strategic culture’ reached a stalemate how to even define culture or even if a testable definition is possible. That ‘strategic culture’ debate highlights the importance of combining multiple independent sources of evidence to generate stronger conclusions than is possible from any one source of evidence alone – as I do in Part III. Indeed, a crucial cognitive dimension to culture is noted by key work at all the scales studied up to the global scale.

I integrate these often disconnected fields into a mutually reinforcing framework. Different aspects of culture help make global strategy, for instance:

- (1) Deterrence, escalation management, and influence more broadly: Understanding how cultures may affect an audience’s decision calculus.
- (2) Domestic political and security cultures of swing states in the global competition for influence will determine how they respond to great powers.

I then conduct two deep dives on culture in Parts II and III.

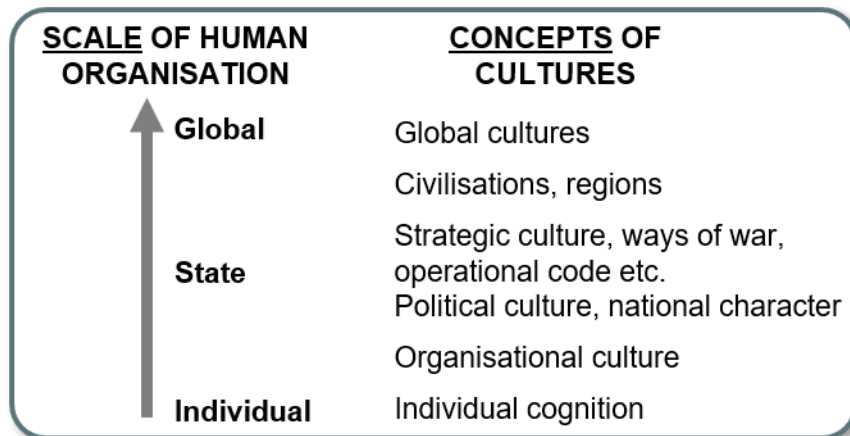


Figure S.3 Culture at different scales; and the two faces of cultures at the state level (domestic and external)

PART II CULTURE IN THE INDIVIDUAL’S MIND AND BRAIN

In Part II of this report, I systematically reviewed thousands of cognitive science papers comparing decision-making in East Asia and the West – a critical comparison when considering future global confrontations involving great powers, and even superpowers, that are clearly neither from European or non-European cultures. It has also been the most studied cross-cultural comparison in cognitive experiments.

I found: (1) for most aspects of choice no robust evidence shows cultural differences (e.g. risk or fairness); (2) some differences are often discussed but lack any clear testing (e.g. East Asians care more about “face”); and (3) some aspects of choice do consistently differ,

e.g. East Asians tend to engage in more *context-dependent* processing than Westerners, by attending more to a salient object's relationship with its context.

Chapter 5 Robust evidence about cross-cultural cognition

Chapter 5 provides a background for Part II.

Successful influence operations require anticipating how humans will decide between options based on the potential rewards, punishments or social motivations that they perceive. Fields like behavioural economics and decision neuroscience have been informative, based largely on Western samples. But cross-cultural cognitive research questions how applicable that framework is between cultures. Thus, in Part II I ask:

What key aspects of human decision-making are robustly common and different in laboratory experiments directly comparing individuals from the West and East Asia?

To answer this question I must ensure the cross-cultural research is robust enough, particularly in light of the 'replication crisis' in which many high-profile experiments cannot be replicated even within cultures. *Thus, I systematically review many studies to assess replication and I apply convergent evidence.*

Moreover, because human decision-making is multifaceted, no isolated discipline can capture its principal components. Thus, here I take three complementary cuts at this challenge, and conduct three separate reviews: behavioural economics (Chapter 6); more traditional cross-cultural psychology (Chapter 7); and computational approaches (Chapter 8).

Bottom line from Part II analyses: Cultural commonalities between the world's humans greatly outweigh differences, but specific differences—e.g. context dependence—can provide operationalizable tools to cause intended, and avoid unintended, effects.

Finally, computational approaches discussed in Chapter 8 provide a new path forwards for cross-cultural cognitive research – with implications for big data, social media and Artificial Intelligence (AI).

Chapter 6 First cut: Behavioral economics

I systematically reviewed nine aspects of choice central to behavioural economics. 27 searches (nine tasks; three databases) yielded 2219 records. I included 36 studies.

For each aspect of choice, I asked what findings were robustly common and different in laboratory studies directly comparing individuals from the West and East Asia

For non-social choice, I identified 13 studies. Key behaviours were seen across cultures (e.g. sensitivity to risk). Cross-cultural results were highly inconsistent for three aspects of choice (**risk, intertemporal choice** and whether outcomes reflect **gains or losses**) and no studies assayed **regret**.

For social choice, I examined five tasks: the **Ultimatum Game** that assays fairness; **Trust Game** (examining trust); **Dictator Game** (related to altruism); **Prisoners' Dilemma** and **Public Goods Games** (both assessing cooperation). I identified 23 studies. I found that key behaviours were seen across cultures (e.g. rejecting unfair offers in the Ultimatum Game), and only two tasks showed possible cultural differences: East Asian trustees consistently

repaid more in the Trust Game, and moderately consistently East Asians contributed less in a Public Goods Game.

Bottom line: Key aspects of decision-making such as responses to risk, losses or fairness do not consistently differ between East Asian and Western individuals – increasing our confidence that they can be applied for policy across cultures.

Chapter 7 Second cut: More traditional cross-cultural psychology.

A second perspective on how culture might affect choice comes from more traditional cross-cultural psychology. Psychology uses more diverse concepts—such as mental processes, emotions, cognition or identity—to explain individuals' psychological functioning.

New searches examined four aspects of choice. For each I conducted a new systematic review of what was common and different between East Asian and Western individuals.

Firstly, East Asians tend to engage in more **context-dependent** or holistic cognitive processes by attending to the relationship between a salient object and the context in which it is located. I identified 56 experiments, which provided moderately robust evidence for cultural differences.

A second contention relates to the nature of **how others are influenced**, which suggests a greater role amongst East Asians for social influence leading to adjustment, conformity and harmony. I identified 32 studies, which provided low to moderately robust evidence for cultural differences.

I also examined two contentions often discussed in relation to their policy relevance: that East Asians care more about **'face'**; and they have a more **hierarchical** understanding of society and social relationships. Very little work assayed face or hierarchy.

Bottom line: Cross-cultural cognitive differences in context-dependence and social influence have a degree of robust support. Part III examines their policy implications.

Chapter 8 Third cut: cultural computations – brains, big data and AI

A third way to understand choice examines the computational processes in the brain by which humans and other animals decide. Essentially, the brain's algorithms.

Computational approaches have enabled rapid advances in neuroscience over the past quarter century – and been key to the recent leap in AI.

Cross-cultural work using computational approaches is just beginning, and I examine two policy-relevant examples: (a) the neural phenomenon of 'prediction error'; and (b) 'metacognition' or 'thinking about thinking.'

Cross-cultural computational approaches hold huge future promise, enabling powerful tools to examine choice all the way from the brain to big data and AI.

I discuss five advantages of these computational approaches, which:

- (1) Bring together diverse disciplinary approaches, e.g. providing mathematical language to capture insights from more traditional cross-cultural psychology and behavioural economics.

- (2) Enable the same computational analyses across mutually reinforcing methods at different scales: e.g. carefully controlled lab experiments; brain imaging; and big-data platforms in thousands of people.
- (3) Can use big data to enable testing of more diverse populations, e.g. older, less educated and less wealthy.
- (4) Directly apply to the analysis of behaviour in environments like social media. Cross-cultural cognitive science can inform models used in media analyses. Also, social media can identify cultural biases to test in the lab.
- (5) Computational neuroscience has been key for recent advances in AI. Cross-cultural differences matter for AI, e.g. for human-machine teams that often beat humans or machines alone.

Bottom line: This is a crucial new area in which the Chinese and others are investing mightily. Computational approaches discussed in chapter 8 provide a new path forwards for cross-cultural cognitive research – with implications for big data, social media and Artificial Intelligence.

PART III CHINESE AND U.S. STRATEGIC CULTURES: DIFFERENT MINDS, DIFFERENT STRATEGY?

In Part III, I examine key aspects of Chinese and US strategic thinking—including offense, defense, deterrence, soft power—and apply cross-cultural cognitive insights from Part II.

Chapter 9 Introduction and summary

In Part III I ask: ***Does contemporary Chinese strategic thinking differ to that in the US and, if so, in what ways?*** This matters to anticipate misperceptions.

To summarise the following chapters:

I apply a new source of empirical evidence that has extensively and causally examined decision-making: the cross-cultural cognition reviewed in Part II.

These cross-cultural cognitive findings benefit two major areas of international relations:

- how deterrence, offense and defense are perceived and represented;
- expectations of how power influences others in the international system.

The cross-cultural ‘cognitive foundations’ at the cognitive level provide specific hypotheses that bridge to decision-making in the international system, which I examine using doctrine, elite opinion and extant scholarship.

Ignoring cross-cultural cognitive differences builds international relations on shaky cognitive foundations. Acknowledging this empirical evidence provides parsimonious, unifying cross-cultural cognitive foundations for how different worldviews shape international relations.

Chapter 10 New cognitive foundations to advance the strategic culture stalemate

This chapter addresses three topics:

- The cognitive foundations for Western thinking about international relations are shaky because they ignore two challenges: (a) the cognitive data they rest upon comes from largely Western populations; and (b) they often ignore the ‘replication crisis.’
- Debates about whether we can ever know if strategic culture matters have reached stalemate. However, key conceptions of strategic culture include a vital *cognitive foundation*. Applying new evidence from cross-cultural cognition speaks to the cognitive foundation and allows us to advance the strategic culture debate’s stalemate.
- I describe this report’s methods to correlate cross-cultural cognitive foundations with US and Chinese strategic thinking. I use three sources of empirical evidence about Chinese and US strategic thinking:
 - Chinese and US doctrine;
 - Elite interviews (e.g. current and former Peoples’ Liberation Army officers, including from the Central Military Commission, and leading scholars);
 - Existing scholarship;

Chapter 11 Context dependence and Chinese thinking on deterrence, offense and defense

Cross-cultural cognitive differences in context-dependence (see Part II) provide a simple framework to **explain how Chinese and US thinking differs on a key dimension of strategy: offence, defence and deterrence**. Specifically:

- ***Finding 1:*** *Chinese accounts of deterrence are more context-dependent, and so they view events and actions more within the context of surrounding events and actions than do US accounts.* In more context-dependent Chinese accounts:
 - *(1a) Even first strikes or pre-emptive actions can be rendered as deterrent actions against an adversary when seen within the broader context of deterrence operations against that adversary.*
 - *(1b) Coersive actions are viewed more holistically within the context of repeated interactions, rendering little meaningful difference between deterrent and compellent threats.*
 - *(1c) The activities and goals of deterrence and warfighting are more holistically integrated than in US accounts.*
- ***Finding 2:*** *Chinese views of offense and defence are more context-dependent. ‘Active defence’ has formed a primary strategic idea and guiding principle from 1949 to the present – and its essence is holistic integration of offense and defence.*
 - *(2a) More context-dependent Chinese accounts view offense and defence as more intimately connected parts of a whole and understood only with reference to the whole.* This more holistic integration is significant for Western debates about how far offensive and defensive capabilities can be distinguished.
 - *(2b) Chinese perceptions of actions—including first-strikes and pre-emption—as offensive or defensive are more strongly influenced by the context of offense or defence with that adversary.* If major Chinese operations, even extending to the 1962 action against India or 1979 incursion into Vietnam, may be rendered

defensive by occurring within a context of defence, the US may perceive it very differently.

- Finally, I discuss *context-dependence more broadly* in Chinese strategic thinking, for instance in crisis decision-making.

Chapter 12 How are others influenced? Soft power and bandwagoning

A second core finding from cross-cultural cognition relates to the nature of how others are influenced, with a greater role amongst East Asians for social influence leading to adjustment, conformity and harmony.

- *Finding 3 Chinese accounts expect audiences to be more strongly influenced by others' opinions, attitudes or norms so the audiences show more conformity or adjustment for social harmony.*
 - *(3a) China places greater emphasis on social influence exerted through soft power.*
 - *(3b) China does soft power differently, placing a greater emphasis in the content of that soft power on themes of adjustment, conformity and harmony. This is seen in the themes of both President Hu Jintao's 'Harmonious World' and Xi Jinping's 'China Dream.'*
- *Finding 4 Chinese accounts tend to expect more adjustment or conformity from audiences (i.e. more 'bandwagoning') rather than actions affirming audiences' autonomy (i.e. 'balancing'). Empirical evidence for this fourth finding is tentative.*

Chapter 13 Conclusions to Part III

I conclude Part III and discuss implications for theory, policy and future research

PART I GLOBAL STRATEGY; THE GLOBE'S CULTURES

Chapter 1 What global does (and doesn't) mean

- 1.1. This chapter defines 'global' in a way useful for policy. I then apply this prefix to:
 - the global system
 - global order, which is the political face of the global system; and
 - global-isation, which is a shift in the balance between scales in the global system.
- 1.2. This provides a solid foundation for later chapters to examine global confrontations and global strategy.

INTRODUCTION

- 1.3. Two challenges have risen to prominence for US policymakers: how to make global strategy; and how to conduct strategy in grey zone confrontations. Both are central to the recent Joint Concept for Integrated Campaigning (JCIC), as well as the National Defense Strategy (NDS) and are seen in a host of other ways.² Each challenge relates to a separate factor for strategy as Fig 1.1 shows: global strategy relates to a global *scale of human organization*, and Grey Zone relates to the *spectrum of competition* from peace to war.

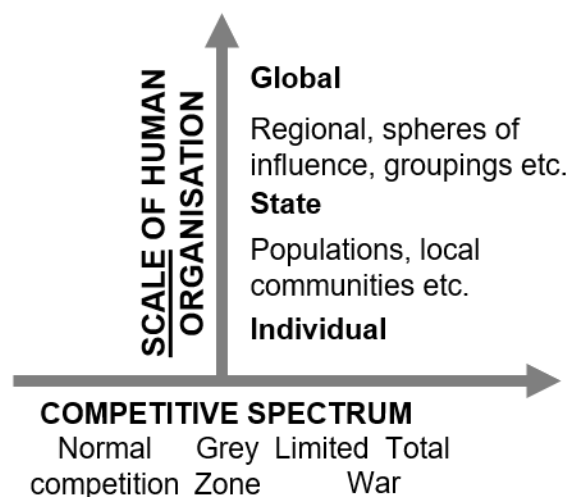


Figure 1.1 Two factors: Scale (individual to global); and the competitive spectrum.

- 1.4. To illustrate these two factors, grey zone conflict can be global (e.g. the Cold War) or more localised (e.g. on the Korean Peninsula after the end of Cold War). Similarly, consider another point along the competitive spectrum, war, which can occur on the global scale of the two World Wars or be more localised.
- 1.5. Amongst the scales of human life, the *individual* scale reflects one natural anchor at the lower end of the spectrum – and the *global* scale naturally anchors the other.³ That global scale of human organisation is vast. We comprise some 7.7 billion people spread over 58 million square miles of land, plus 6 in space and some thousands or millions on the seas. The global scale encompasses some 193 countries; 1000 cities

² US Department of Defense (DoD, 2018) Joint Concept for Integrated Campaigning; US DoD (2018) Summary of the 2018 National Defense Strategy of The United States of America: Sharpening the American Military's Competitive Edge. For a discussion of Grey Zone conflict see e.g. (Wright, 2019), www.intelligentbiology.co.uk.

³ Of course, many significant scales lie between these points, such as the family, community, sub-national region (e.g. Catalonia), the state (e.g. Spain), spheres of influence (e.g. in Russia's orbit), regions (e.g. Europe) and so on. No single report could examine them all, so I concentrate on key scales—such as the state—that matter in themselves and that also provide a vantage point from which to illuminate scales above and below them.

with over 500,000 inhabitants; 4 billion internet users; 7000 languages; and 100 million Amazon Alexas.

- 1.6. Thus, we need a usable definition of what 'global' means for policymakers who seek to make global strategy across the spectrum of conflict.

WHAT DOES GLOBAL MEAN?

- 1.7. I define '**global**' as *meaningfully involving all the world's continents on which significant fractions of the world's population live*. It is a scale in the organization of human life (Fig. 1.1). Global relates to the whole world, so this definition must contain both a geographical component—reflecting spread across the earth—and a human component (Fig. 1.2). A practical definition need not include every part of every land mass, but should include the great bulk of the world's humans.
- 1.8. So, which continents⁴? We must clearly include the 'world island' that comprises Europe, Asia and Africa. The Americas also had a sizeable fraction of the world population before Columbus landed (Than, 2011) and has had since. I do not include Antarctica with a population of only a few thousand despite its being larger (5.4m sq mi) than either Europe (3.9m sq mi) or Australia/Oceania (3.3m sq mi). I do not include Australia, at least until the early Twentieth Century.⁵ Even now the Australian population is over an order of magnitude smaller than any other continent outside Antarctica, and two orders of magnitude smaller than Asia's population of 4.5 billion.
- 1.9. We can now consider useful applications of this prefix 'global,' such as global system, global order, global-isation, global confrontation and global strategy.

⁴ All ways to split the world into meaningful geographical chunks are contentious. Consider just three problems. (1) Where does Europe end? That matters to understand Russia (Judt, 2005). (2) A 'MENA' region including the Middle East and North Africa has merits. However, it excludes Central Asia (which literally borders Iran) whilst at the same time including Morocco far over on the Atlantic coast. (3) How does one think about islands? Greenland is considered an island at 840,000 sq mi, but Australia the smallest Continent at 3 million sq mi. And islands matter - Indonesia is the world's most populous majority Muslim state and is spread over at least 14,000 islands. Thus, for clarity here I use the well-known concept of continents, which 'are understood to be large, continuous, discrete masses of land, ideally separated by expanses of water' (Lewis and Wigen, 1997).

⁵ The population before European colonisation of some 1 million comprised a small fraction of the world's population, and had less political development than for instance the pre-Columbian American societies like the Aztecs or Incas.. In 2018, Australia's population of 25 million ranked 53rd amongst states globally, its population growth rate of 1.1% ranked 77th globally; it had the 13th biggest economy; 6th biggest by landmass. <https://www.bbc.co.uk/news/world-australia-45093429>. Including or excluding Australia matters not only for thinking about strategy now, but also when deciding if the Seven Years War (1753-63) was a global confrontation as it occurred before European colonisation began in 1788.

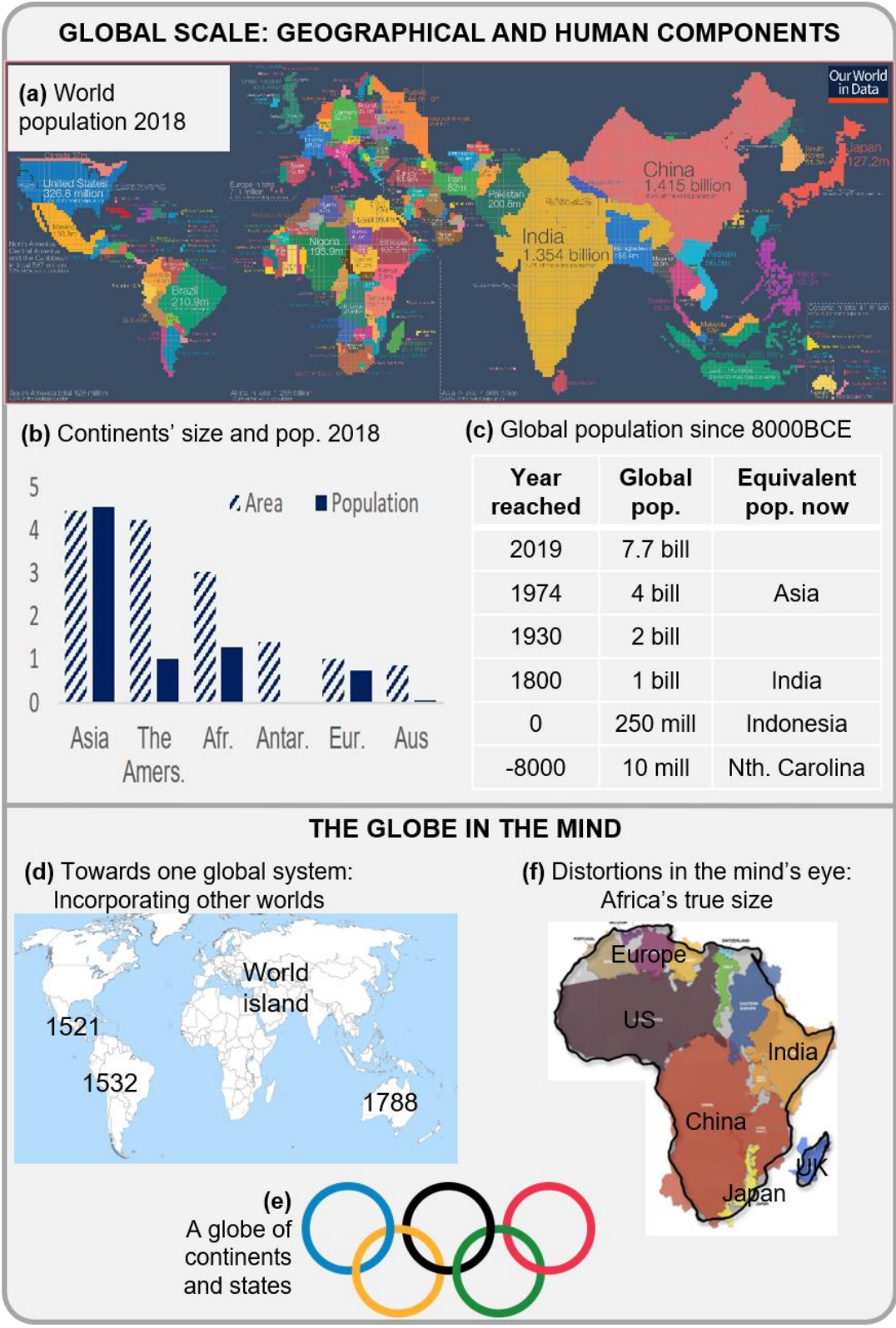


Figure 1.2 The global scale has geographical and human components. **(a)** Map scaled by population (www.ourworldindata.org/world-population-growth, download 30 May 2019). Panels **(b)** and **(c)** population data from www.gapminder.com. **(d)** European conquests of the Aztec (1521) and Incan (1532) empires and colonisation of Australia (1788) brought these areas into the global system. Panel **(e)** illustrates how the mental world is built of countries and continents, whilst panel **(f)** shows how distorted our mental maps can be.

THE GLOBAL SYSTEM

- 1.10. The **global system** is a system-of-systems covering the whole of human society across all the world's continents on which significant fractions of the world's population live, and its key sub-systems include:
- states (e.g. the US or China),
 - international subsystems (e.g. the global financial system or the UN; see Box 2.2), and
 - systems at other scales (e.g. sub-state regions like Catalonia; or above the state like the competing Cold War liberal and communist international systems).

- 1.11. The global system isn't a thin crust sitting atop states – it is the system-of-systems *incorporating* all the way from the global down to the local scale and to human individuals (Fig. 1.3). Indeed, states are themselves systems-of-systems, as are large organisations within a state such as the criminal justice system.

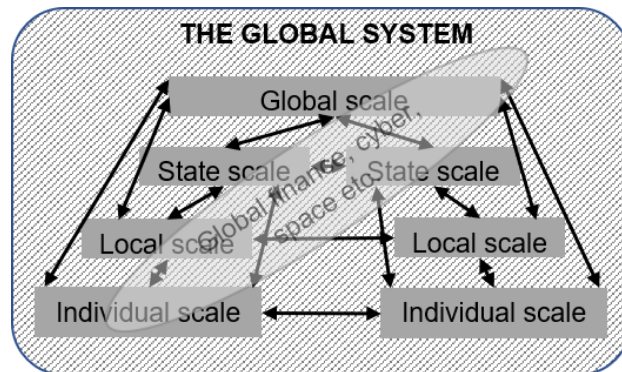


Figure 1.3 The global system is a system-of-systems.

- 1.12. We can apply different lenses to examine such human systems, and four that capture a lot that matters are the *political*, *economic*, *social* and *cultural* lenses (Fig. 1.4). All are equally valid and highlight different dimensions of the system. Looking at global confrontations across history, for instance as I do in Chapter 2, shows the importance of all four lenses, including:
- An **economic lens** helps explain a lot about who won global wars (e.g. World War Two) or global grey zone conflict (e.g. the Cold War), aided by their relative wealth, economic production and financial capabilities (*pecunia nervus belli*; money is the sinew of war).
 - A **social lens** highlights factors like demographics, urbanisation or education levels that profoundly affect the political stability and military capabilities of great powers and swing states in global competition.
 - A **cultural lens** examines the ideas, customs and social behaviours of human groups that reflect 'how things are done around here'. It describes the expectations, norms and religious or other worldviews that enable our personal lives, societies and global system to function – and can drive dysfunction. Chapter 4 and Parts II and III consider culture in detail.
- 1.13. A fourth lens is **political**. Politics may be considered the processes of cooperation and competition by which interests are resolved, or the actions or activities concerned with achieving and using power. Given our concern in this report with power and strategy in global competition—and indeed that a useful definition of strategy itself is 'the art of creating power—this political lens is crucial. I next turn to the global system's political face: the **global political order**.



Figure 1.4 Four lenses to view the global system: political, economic, social, cultural.

Box 1.1: What the global system isn't

Many components make up help make up the global system, but none of them alone comprise the global system.

Global versus international: I note two reasons why the global isn't just reducible to the international. (1) Important phenomena can be international but not in a meaningful sense global. In the contemporary world, when Lichtenstein and Austria interact it is international but clearly not global. Huge scholarly attention is rightly lavished on the interactions of European states—for instance in the 17th century Thirty Years' War ending in the famous Treaty of Westphalia (1648)—that were international but not global., because the states involved (e.g. Lichtenstein and Austria) are considered together they warrant the term international but not global. NDW maybe special case of *all* the globe's states since all came in contact. (2) 'International' can be taken as a view that world affairs boils down to relations between states – which like all great simplifications can be a useful perspective, particularly for some scholars, but ignores the interdependence and interconnectedness that drives global politics.

Global versus the 'Liberal International Order': During the Cold War, a communist system ran a large part of the world, including the globe's largest countries by size (Union of Soviet Socialist Republics; USSR) and population (People's Republic of China; PRC).The USSR sought to overthrow the US led capitalist system. During the Cold War, it is hard to sustain the argument that the global system was a 'Liberal International Order' when so

much of it clearly wasn't 'Liberal' in any meaningful sense. For other recent discussion of this see e.g. (Glaser, 2019; Mearsheimer, 2019).

Box 1.2: Highly globalised global subsystems

Within the global system, states like China or the US remain key subsystems. But other subsystems are currently so globalised (i.e. driven by factors at the global rather than lower scales) that understanding them requires at least partly adopting a global scale perspective. Examples include:

Global financial system: The global scale of finance is shown by the worldwide effects of financial crises like those in 2007-9 or the interwar 'Great Depression.' We also see huge and growing global financial flows. Between 1990 to 2018, for instance, international assets and liabilities rose from 128% to 401% of GDP (The Economist, 2019).

Global economy: Transnational corporations are hugely powerful and influence governments. US companies, for instance, inhibited US Government responses to Chinese economic espionage (PBS, 2019). Global supply chains matter deeply in many industries. Illustrating these flows and their growth, world trade rocketed from 39% of GDP in 1990 to 58% in 2018

Cyber/information: The idea of the internet as a borderless world where national sovereignty didn't matter was hopelessly naïve. But flows of information across borders are vast and growing, with one estimate that the volume of data crossing borders rose by 64 times over the past decade. Moreover, global 'cyber' deeply penetrates all societies now except the very poorest or most isolated like North Korea.

Infectious diseases: By definition a pandemic is global (WHO, 2010) and relates to global health systems. Past pandemics killed millions, and pandemic flu, for instance, is a non-trivial global threat.

Outer Space is a 'commons.' It is a resource that cannot be owned in whole or part and is accessible to all – just like the commons of 'Olde Englande' on which the local community could all herd their sheep. Space may be termed a 'global commons,' which like the **oceans** is large-scale and inherently international (Wright, 2018b).

Nuclear weapons are profoundly global, not least because the externalities of a US-Russia nuclear war threatens every human on earth.

Notes: Financial, trade and data figures from (The Economist, 2019).

THE 'GLOBAL ORDER': THE GLOBAL SYSTEM'S POLITICAL FACE

1.14. **Global order** is the political face of the global system. Viewing the global system through a political lens, we see it as a political system-of-systems covering all of human society on all continents on which significant fractions of the world's population live, which includes:

- (1) social institutions around which actors' expectations converge; and
- (2) the distribution of power amongst key subsystems in the global system that, as described above, include (a) states, (b) international subsystems, and (c) systems at other scales.

1.15. Politics may be considered as the processes of cooperation and competition by which interests are resolved, or as the actions or activities concerned with achieving and using power – and at the global scale this often involves military capabilities and the presence, threat or use of force. Like politics at other scales, the global order involves material factors, subjective ideas or perceptions (e.g. of legitimacy), path dependence (i.e. ‘history matters’) and the interaction of factors from multiple scales of human organisation. These various features are reflected in definitions of global order, for instance⁶:

- A textbook definition: ‘World order is the distribution of power between and amongst states and other key actors, giving rise to a relatively stable pattern of relationships and behaviours.’ (Heywood, 2013, 422)
- A prominent academic definition: ‘International regimes have been defined as social institutions around which actor expectations converge in a given area of international relations. Accordingly, as is true of any social institution, international regimes limit the discretion of their constituent units to decide and act on issues that fall within the regime’s domain. And, as is also true of any social institution, ultimate expression in converging expectations and delimited gives international regimes an intersubjective quality.’ ... ‘The analytical components of international regimes we take to consist of principles, norms, rules, and procedures.’ (Ruggie, 1982, 380)
- Henry Kissinger’s recent book ‘*World Order*’ gives the following definition: ‘World order describes the concept held by a region or civilization about the nature of just arrangements and the distribution of power thought to be applicable to the entire world. An international order is the practical application of these concepts to a substantial part of the globe—large enough to affect the global balance of power. Regional orders involve the same principles applied to a defined geographic area. Any one of these systems of order bases itself on two components: a set of commonly accepted rules that define the limits of permissible action and a balance of power that enforces restraint where rules break down, preventing one political unit from subjugating all others.’ (Kissinger, 2014, 9)
- In his book on the global Cold War, scholar Odd Arne Westad described how the ‘The Cold War constituted an international system, in the sense that world’s leading powers all based their foreign policies on some relation to it. ... [it] dominated domestic discourses, but was not the only game in town.’ (Westad, 2017)

1.16. As long as the globe is linked together, as it has been since shortly after 1492 (Fig. 1.2d), there will be a global order. But that global order is not static, which brings us to globalisation.

GLOBALISATION: CHANGE IN THE DEGREE THAT THE HUMAN IS GLOBAL

1.17. I define **globalization** as a shift in the relative amount of influence that the global system’s different scales exert on the lives of humanity’s individuals, and specifically an increase in the degree that those lives are global. Globalisation does not only occur in economics or politics alone, it is a set of processes occurring across politics,

⁶ See also e.g. (Glaser, 2019; Mearsheimer, 2019)

economics, society and culture (Fig. 1.4). Previous definitions reflect these multiple aspects, e.g.:

- 'globalisation can thus be defined as the intensification of worldwide social relationships which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa.' (Giddens, 1990, 64)
- 'globalisation refers to the expansion and intensification of social relations and consciousness across world-time and world-space.' (Steger, 2017)

- 1.18. The building blocks of globalisation began around 3000BCE with the emergence of 'civilisations.' The Sumerians in Mesopotamia and Egyptians along the Nile were followed by India, China and so on. The scale of human societies increased through inventions like the wheel or writing, and the creation of vast empires like that of Rome or the Mongols and transcontinental trade routes like the Silk Road. But these were just building blocks.
- 1.19. Globalisation really rose above zero soon after Columbus's voyage of 1492, with the creation of a global system when the Americas were meaningfully integrated into the trade, political and social systems of the Old World (Europe, Africa, Asia). The separate mental worlds in which Aztecs or Incas lived were, for better or worse, brought into the same mental world as the Europeans or Asians. system. that significant fractions of the world's populations Globalisation has proceeded apace ever since.
- 1.20. By the nineteenth century, science, technology and European empires had radically increased the degree of globalization, as observers at the time described. Marx and Engels, for instance, wrote of
- 'Rapidly improving the instruments of production, the bourgeoisie utilizes the incessantly easing modes of communication to pull all nations into civilization – event the most barbarous ones ... In a nutshell, it creates the world in its own image.'*
- 1.21. The global scale's influence has continued to increase over the past quarter millennium and we can expect that to continue. This does not mean all globalisation occurred simultaneously across all aspects of the global system. Economic globalisation has increased and decreased over parts of the last 200 years. As the next chapter discusses, economic globalisation and global confrontations are not correlated in a simple way.
- 1.22. A different question, however, is whether the *rate* of globalization increased over the modern period from 1750 to the present and, if so, what that means for the future. That is, we can anticipate that the next epoch of global history will be more globalized than our current one – but how much more? Nothing yet concretely suggests that the next phase of industrial revolution related to Artificial Intelligence will occur at a much faster rate than those before it.

Box 1.3 Globalisation of ideas

Many ideas have spread globally to leave profound global impressions. Coinciding with the past quarter millennium of Western political, military and economic dominance whilst many Western ideas went global, fewer non-Western ideas showed comparable global reach – for good or ill. Examples include:

Social Darwinism: The now deeply controversial theory that human groups and races are subject to the laws of natural selection as Charles Darwin had perceived in plants and animals in nature. Popular in the late 19th and early 20th centuries, it argues that the weak were diminished and their cultures delimited while the strong grew in power and in cultural influence over the weak. Human life in society was held to be a struggle for existence ruled, in British thinker Herbert Spencer's phrase, by 'survival of the fittest.' These ideas are argued to have contributed to war and conflict across the globe: from influencing the onset of World War One to the thinking of China's nationalist leader Chiang Kai-shek.

Liberal democracy: With roots in Europe and the European offshoots like the US, and in particular the English-speaking countries, various waves (and counterwaves) of democratisation spread globally. Now it is well established in countries like Japan, South Korea or Taiwan.

Communism: Testament to the global reach of Western European ideas, the globe saw a Communist superpower, and the world's most populous state—China—is still nominally Communist.

Islam: The remarkable spread of Islam across the world occurred in the premodern and modern eras.

CONCLUDING REMARKS

- 1.23. An examination of the 500 years shows the importance of the political face, the economic face, the social face and the cultural face. The next chapter turns to examine global confrontations. Confrontations have become more global – but what does that mean in practice and what lessons can we draw from the global scale over the past 500 years of confrontation?

Chapter 2 Global confrontations: a history since 1492

- 2.1. This chapter defines a 'global confrontation' and examines the global dimension of confrontations since sustained transoceanic links began around 1500. Key findings:
- Three historical epochs emerge: 1500-1753 saw European confrontations and growing transoceanic links; from 1754-1939 the Seven Years' War began an epoch of Eurocentric global confrontations; and from 1939-present Japan's role in World War Two heralded an era of global confrontations waged with culturally non-European great powers.
 - Surprisingly I find only four global confrontations: the Seven Years War (1754-1763), the two World Wars and the Cold War.
 - Four central lessons emerge: (1) great power confrontations have been increasingly global and that will likely continue; (2) great power protagonists have been increasingly culturally non-European, and whether or how that might matter is examined later in the report; (3) global system effects matter, and look out particularly for third parties that end up the real winners of global confrontations; and (4) whether or not a global dimension to strategy pays dividends depends on identifiable factors.
- 2.2. This chapter first defines a 'global confrontation', then summarises the key findings and lessons, describes the methods, and finally discusses each historical epoch in detail.

INTRODUCTION

- 2.3. A **global confrontation** is one that meaningfully involves all the world's continents on which significant fractions of the world's population live. I examine cases from around 1500 when sustained *transoceanic* links began to take off⁷ and brought the Americas into the global system. I identify and examine global confrontations, their emergence and 'dog's that didn't bark' (confrontations that could have been, but weren't, global). For much of the earlier period I focus on the European powers (and offshoots like the US) as the sole transoceanic actors. I consider confrontations between great powers—hence excluding the 'Global War on Terror' discussed in Box 2.1—and along the competitive spectrum I include Grey Zone confrontations and wars.

⁷ The Portuguese began exploration along the African coast under the sponsorship of Prince Henry the Navigator (1394-1460), and in 1498 Vasco da Gama had reached India by sailing around Africa. In 1492 Christopher Columbus voyaged to the Americas for the Spanish crown. Already by 1494 the Treaty of Tordesillas divided new discoveries outside Europe between Spain and Portugal. North America was reached for the first time in this era by John Cabot for the English crown in 1497. In 1522 Ferdinand Magellan circumnavigated the world, as did Englishman Sir Francis Drake in 1580. Earlier in the 1400s Chinese voyages led by admiral Zheng He had begun, but the Chinese abandoned these capabilities.

2.4. Whilst numerous histories of conflict exist⁸, the novelty here is to break this half millennium down by how *global* the confrontations were. Table 2.1 summarises the findings, from which three epochs⁹ emerge:

- 1500-1753 European powers grew their transoceanic links;
- 1753-1939 The Seven Years War began an epoch of Eurocentric global confrontations; and
- 1939-present In World War Two Japan became the first Great Power from neither from Europe nor its offshoots to play a central role.

		Europe	Asia	Americas	Africa
<i>1500-1753 European confrontations and growing global capabilities</i>					
1519-1659	Habsburg bid for European mastery	+++	+/-	+	-
1689-97	French bid for European mastery, Part I (1660-1753)	+++	+/-	-	-
1702-14		+++	+/-	-	-
1739-48		+++	+/-	+/-	-
<i>1754 to 1939 Eurocentric global confrontations</i>					
1754-63	Seven Years' War	+++	+	+	+/-
1793-1815	French Revolutionary / Napoleonic Wars	+++	-	+	+/-
1904-14	Pre-WW1 Grey Zone	+++	+	-	+
1914-18	World War 1	+++	++	++	+
1931-39	Pre-WW2 Grey Zone	+++	+++	-	+
<i>1939-present Global confrontations waged with culturally non-European great powers</i>					
1939-45	World War 2	+++	+++	+++	++
1945-91	Cold War	+++	+++	+++	++
2014-present	Current Grey Zone era	+	+	+	+/-

Table 2.1 Chronology of confrontations from 1500-present. Global confrontations in bold.

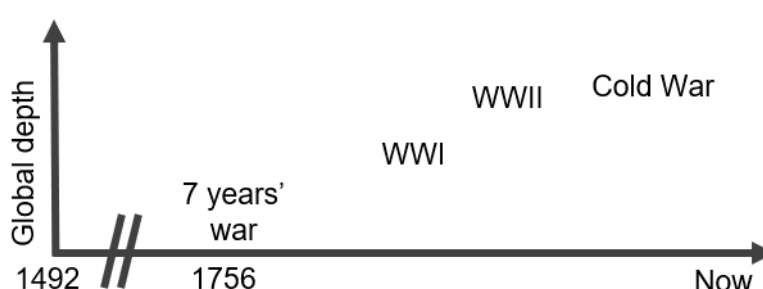


Figure 2.1 Global confrontations since the first in 1756 have become more deeply global

2.5. Surprisingly, I find only **four clear cases: the Seven Years War (1754-1763), the two World Wars and the Cold War**. Dogs that didn't bark—confrontations that could

⁸ The 1648 Treaty of Westphalia, 1789 French revolution or 1815 Congress of Vienna, for instance, are often taken as obvious points to parse history over this period.

⁹ Whilst describing three distinct periods, inevitably they are somewhat arbitrary as they often reflect processes ongoing over decades or even centuries.

have been, but weren't, global—are also illuminating. Fierce Grey Zone competition preceded each World War, but it wasn't global because the United States dominated the Americas¹⁰ and although a looming economic power, the United States was conspicuously absent from both.

- 2.6. Of course, before discussing trends across time we must note that the period from around 1500 is not just the dawn of the global age. Indeed, historians normally date the beginnings of 'Modern European History' from the Italian Wars that opened with the French invasion of 1494. Moreover, that French force of Charles VIII's was the first 'modern army, in that it consisted of the three arms (infantry, cavalry and artillery) deployed in various mutually supporting tactical combinations, and was very largely made up of men paid from a central treasury. The army was not fundamentally different in composition from that Napoleon would lead over the same battlefields three hundred years later (Howard, 1976, 19–20). Industrialisation then exerted its globe altering effects. In the future, perhaps digitisation will too.
- 2.7. Modernisation, Westernisation, Industrialisation and not just Globalisation are all important and—whilst deeply enmeshed—they all have their own dynamics. If by a quirk of geology the Americas didn't exist, then Europe would anyway have entered 'Modern European History.' Understanding the global is one—but not the only—important piece of the puzzle of understanding history from 1500 to the present.

LOOKING ACROSS THE HISTORICAL RECORD: THEMES AND TRENDS

- 2.8. From a global perspective, four central lessons emerge that is useful to highlight before delving into the historical cases.
- 2.9. *LESSON ONE The increasingly global character of great power confrontations is not new, has been ongoing for half a millennium and we can anticipate its continued increase.*
 - The global character of great power confrontations steadily increased from 1500 until in 1754 the Seven Years War became the first global confrontation—one which meaningfully involved all the world's continents on which significant fractions of the world's population live—and the twentieth century then saw three subsequent global confrontations. This is one aspect of globalisation, and is not simply reducible to one single dimension of the global system, be it political, economic, social or cultural globalisation.
 - We cannot, for instance, just read out what will happen to the globalisation of confrontations solely from economic globalisation, to which 'globalisation' is often reduced. The first wave of economic globalisation began around the mid-1800s and peaked in 1914 during which no global confrontations occurred. Then during the 'counterwave' of decreased economic globalisation from 1914 to 1945 there was markedly increased globalisation of confrontations with World War One and then the even more globalised Second World War. But it is not simply an inverse relationship – because from 1945 until recently we have witnessed a second wave of economic globalisation despite much of that growth occurring during the global Cold War.

¹⁰ British Empire in the Americas, Canada and the Caribbean as well as informal influence in South America. But there was no real

- What does this mean now? Economic globalisation has if anything stalled since 2008 (The Economist, 2019) and since around 2014 we see an uptick in confrontation that is on the cusp of becoming global. No simple relationship exists between these two trends and we should carefully judge each of globalisation's multiple aspects.

2.10. *LESSON TWO A clear trend shows the increasing involvement of great power protagonists that are not European (or European offshoots like the US) in global confrontations – but does that matter?*

- Answering whether, and if so how, this might matter relies on the potential importance of culture, examined in Chapter 4, Part II and Part III.
- London is further geographically from Los Angeles (8,750 km) than from Beijing (8,136 km). Melbourne is a massive 16,893 km from London. But when it comes to culture, simple geographical distance is often seen as less important than other factors such as older cultural traditions. But how much—and in what specific ways—might such culture *really* matter for European or Western cultures versus those in Asia or China?
- Moreover, consider other meanings of culture. Within Europe, the trust embedded in institutional cultures was critical for governments to raise finance during confrontations – and that proved central to seventeenth century Dutch success against the Spanish, or eighteenth century English success against the French (Kennedy, 1988). Governments' organisational culture also impacted on the effectiveness of their strategies – in the Seven Years' War that was the first global confrontation, for instance, the more organised and disciplined English organisational culture at the apex of government contrasted against the factionalised and ill-disciplined French strategic decision-making (Baugh, 2014).

2.11. *LESSON THREE Global system effects—properties of the global system not necessarily just the confrontation's main protagonists— matter and in particular look out for 'third parties' that end up the real winners.*

- Britain, for instance, benefited mightily from its global strategy for some two hundred years – until when it fought Germany in World War One it spent its money with third parties (the US and Japan) who won the most.
- So, in a US-China confrontation now a key question for US policymakers would be whether any key third party profiteers exist now or in the near future? Amongst developing countries no candidates emerge—with the partial exception of India due to its sheer size—because Chinese economic performance over the past 30 years is unique. Chinese GDP per person (measured at purchasing power parity; PPP) has risen tenfold since 1990, whilst other countries that were as poor as China was in 1990 have only seen their purchasing power doubled (The Economist, 2018). What about in the developed world? Any individual developed country would struggle as they are all too small in population terms, and once a country is economically developed (i.e. its people have reached the production frontier with current technology) then its GDP is basically determined by population.¹¹ One

¹¹ To illustrate, the top six developed countries by population are (in order) US > Japan > Germany > France~=UK > Italy, and that is exactly the order of their GDP (measured in US\$ or PPP). The next four most populous developed countries are South Korea > Spain > Canada > Australia, and they also have the next four

possibility is the EU, which together has a GDP only slightly smaller than the US – and although its internal political divisions render it unlikely to emerge as a superpower (discussed in Chapter 3) it could end up the big third party winner of a US-China confrontation.

2.12. *LESSON FOUR Whether or not a global strategy is worth pursuing depends on whether or not the global dimension pays. What determines this includes: the presence of third parties; the relative balance of the 'Continental' and 'global' legs of strategy; the ability to be restrained; and loopholes in a blockade.*

- A global footprint is desirable if it pays, because it gives that great power or superpower the financial capacity to win the type of protracted confrontations that great powers face. Consider Britain in the 18th and 19th centuries, or the US in the Cold War. (a) In the Cold War, for the US this partly involved helping third parties, e.g. the Marshall plan built up European allies and markets for American exports, or Japan that got huge economic boosts from US help (Westad, 2017). (b) But the US balanced that by not allowing too much economic advantage to third parties, illustrated by the floating of the US exchange rate under President Nixon to prevent a now very wealthy Japan gain too great a benefit (indeed, it became richer than the US per capita). (c) The US benefitted from being a critical centre of many global networks. (d) But, making it pay can be difficult – for instance in 1776 when Britain had asked for American colonies to help cover the cost of their defence it led to rebellion.
- A global footprint can be a detriment if it doesn't pay. A classic case is the British Empire in the 1930s. The cost of defending the Asian British Empire against Japan took vital resources away from defending Europe against Germany, but British capabilities relied on its allied Dominions (e.g. Australia or Canada) and Empire. This was an insoluble dilemma because Britain's relative resources were much depleted by War, because the globalization of industrialization enhanced Japanese power, and because the US had benefitted so mightily from World War One at Britain's expense.
- A purely offshore strategy is rarely feasible. Britain won the first global confrontation—the Seven Years' War—against the more powerful French not only because of the 'global' leg of the strategy, but also the 'continental' leg within Europe. Blockades are particularly difficult if countries can avoid them, as Germany in 1939 through the Soviet Union.

METHODS IN THIS CHAPTER

2.13. I define a **global confrontation** as one that meaningfully involves all the world's continents on which significant fractions of the world's population live. I include those between great powers,¹² and involving either grey zone confrontation or war.¹³ My definition excludes confrontations before 1492, when although large populations existed in the Americas they were not involved in global empire building or

highest GDP figures although the exact order of the four depends on whether US\$ or PPP is used. Based on figures for 2018 from the World Bank website.

¹² . A state deemed to rank amongst the most powerful in a hierarchal state-system, and so capable of holding its own against any other nation. I use such a standard definition to avoid confusion. See Chapter 3 for discussion.

¹³ For discussion of what 'grey zone' means see Wright (2019) *From Control to Influence*.
www.intelligentbiology.co.uk

confrontations. I also exclude confrontations that, whilst significant, did not spread globally. The Crimean war (1853-6), for instance, involved three very powerful states (Russia pitted against an Anglo-French-Turkish force), some 800,000 died, and crucial theatres included the Baltic, Crimean Peninsula and the Caucasus. But it wasn't global.

- 2.14. To identify the universe of possible cases from around 1500 to the present I first examined general historical analyses of confrontation that covered all, or a large part, of the period (Bobbitt, 2002; Howard, 1976; Kennedy, 1988; Lebow, 2008; Mearsheimer, 2003; Townshend, 2005). To potentially capture additional grey zone confrontations involving crises, I examined historical analyses involving escalation from mid-eighteenth to twentieth century (Smoke, 1977), and crises from the late nineteenth century to the Cold War (Lebow, 1981; Snyder and Diesing, 1977) and from the mid-nineteenth century to the Cold War (George, 1991). Specific bibliographies for each period are noted in each section.
- 2.15. For each confrontation and era identified, I asked how global it was by looking for involvement in each of the continents of interest: Europe, Asia, the Americas and Africa (findings summarised in Table 2.1). I also examined the importance of the global dimension that occurred outside the confrontation's central theatre(s), which helped identify key takeaways for global strategy.

1500-1753: EUROPEAN CONFRONTATIONS AND GROWING GLOBAL CAPABILITIES

- 2.16. This quarter of a millennium saw no global confrontations, although it saw fierce competition between European states whose non-European and transoceanic links steadily grew in importance.
- 2.17. Throughout these two and a half centuries a dominant European power attempted to gain hegemony within Europe and was prevented from doing so by shifting alliances. From 1500 to 1659 that dominant power was the Habsburgs and then from 1660 onwards France took over the quest to dominate Europe. I describe each of these two bids for European mastery in turn.

1519-1659 The Habsburg bid for European mastery

- 2.18. In 1519 the inheritance of the Habsburg ruler Charles V brought together powerful European territories in Spain, Italy, Austria, the Germanic states and the Netherlands. He was Holy Roman Emperor, an essentially supranational role amongst the Germanic states. Fighting against this European regional superpower (Goodwin, 2015) were combinations including France, England and various Germanic states. Table 2.2 shows a measure of relative military strength.
- 2.19. Competition continued throughout the period. This erupted into a number of wars, which included famous episodes like the Spanish Armada against England (1588) and the Thirty Years' War (1618-48) that in Germany concluded with the 1648 Treaty of Westphalia. The Thirty Years' War continued as a Franco-Spanish war until English forces tipped the balance and concluded that war—and indeed the whole epoch—in France's favour.

Date	Spain	United Provinces	France	England	Sweden
1470s	20,000		40,000	25,000	
1550s	150,000		50,000	20,000	
1590s	200,000	20,000	80,000	30,000	15,000
1630s	300,000	50,000	150,000		45,000
1650s	100,000		100,000	70,000	70,000

Table 2.2 Increase in military manpower 1470-1660 (Kennedy, 1988, 71).

2.20. **How global were these confrontations in the Habsburg bid (1519-1659)?** *Europe* was the central conflict. *Asia* influenced events: the Ottoman Turks drained Habsburg power and indeed in 1542 the French and Ottoman fleets combined in an assault on Nice (Kennedy, 1988, 46). The *Americas* became important, particularly when American silver poured into Spanish coffers from the 1560s to late 1630s – although even then Castile was the economic heart of Spanish power. *African* trading posts were affected later in the period as part of broader Dutch naval expansion. By the seventeenth century Dutch maritime expeditions struck at Brazil, Angola and Ceylon and the famous Dutch East India Company was founded in 1602.

- In sum, non-European factors featured, albeit not decisively, and little direct conflict occurred outside Europe.

2.21. **Global takeaways from the Habsburg bid (1519-1659):**

- (1) *Many themes touted as exciting and new in 20th and 21st Century globalisation aren't new.* The period 1500-1660 illustrates two examples, which are *supranational governance* and *transnational networks*. Supranational governance mattered during this period of Habsburg dominance, and has continued to matter in some form ever since, albeit waxing and waning. It still mattered after the Treaty of Westphalia (1648), for instance the nineteenth century Concert of Europe could certainly involve intervening in the states domestically (Schroeder, 1994). Networks mattered during this period, such as those spreading the Reformation or Calvinism to the Medici family who pop up as Popes or leading French Royalty.
- (2) Global factors can be both blessing and curse. Vast flows of New World Spanish silver helped pay soldiers *and* caused damaging inflation.
- (3) Although not global, two further points bear emphasis: (a) Imperial overstretch for the Habsburgs was clear with their territories scattered across Europe, but less clear was what commitments to cut. (b) Domestic productivity of the Spanish economy was eventually a fatal weakness – for largely political reasons the greatest economic burden fell on one region (Castile) and its productivity suffered.

1660-1753 The French bid for European mastery (Part I)

2.22. Following Spain's final defeat, France was the greatest of the European great powers. Under the 'Sun King' Louis XIV (1661-1715), French strength rested on indigenous materials. These included its agricultural self-sufficiency and a huge population of 20 million that permitted an increase in the army from 30,000 troops in

1659 to 97,000 in 1666 and then a huge 350,000 in 1710. Table 2.3 shows French dominance. France at this time also utilized these resources well, with enhanced organization of the state under brilliant ministers like Colbert, Le Tellier and Martinet (Kennedy, 1988, 97–8).

- 2.23. France's capacity to dominate West Central Europe was only held in check by a combination of maritime and continental neighbours (e.g. the Netherlands, England, Austria and some Germanic states) during a series of prolonged wars (1689-97; 1702-14; 1739-48).
- 2.24. **How global were these confrontations in the French bid (Part I, 1660-1753)?** *Europe* remained the central theatre throughout. As before, *Asia* mattered in part because the Ottoman Turks remained a distraction for France's adversaries. The Ottomans had besieged Vienna in 1683. *Africa* saw relatively little activity in the confrontations, although as elsewhere European links and capabilities grew.
- 2.25. Looking over the three wars reveals a steady increase in the global nature of the confrontations, which went hand-in-hand with expanding European trading empires.
- **1689-97** The war in *Europe* was an exhausting grind where both sides had strong defensive fortifications, and both sides fielded hugely expensive armies of 250,000 men. It ended in something like the status quo. The allied powers' naval blockade and French commerce raiding were both accompanied by extra-European campaigns in the *Americas* (West Indies, Newfoundland, Acadia) and *Asia* (Pondicherry), but none mattered sufficiently to swing the European maritime or continental balance (Kennedy, 1988, 133–4).
 - **1702-14** The contest was decided in *Europe* by four stunning victories of Anglo-Dutch forces under the English Duke of Marlborough, which destroyed multiple French armies. Again, neither the Allied blockade nor French commerce raiding did more than wound, and extra-European events were not key although Britain made some colonial gains at the peace (Kennedy, 1988, 136).
 - **1739-48** In 1739 the British and Spanish began a relatively minor regional war over American colonies, in which French aid to the Spanish could be considered as grey zone activity. Separately, in 1740 a Franco-Prussian alliance attacked Austria in the War of Austrian succession. By 1744 French advances in Germany and other parts of Europe were significant. Fearing French victory in Europe, in 1744 formal Anglo-French warfare began, with the British supporting European armies (crucially through financial aid). At sea Britain imposed a tightening blockade on France. Inconclusive and relatively small-scale Anglo-French fighting occurred in *North America* and *India*. Continuing war strained both sides financially. The growing importance of extra-European factors are indicated by the balance that concluded the war: whilst in Europe the French had the Dutch at their mercy; this was balanced in part by Britain having had the better of colonial/maritime conflict (Kennedy, 1988, 142–3).
- 2.26. **Global takeaways from the French bid for European mastery (Part I, 1660-1753):**
- French strategy fell between two stools: they could have gone on the offensive *either* globally *or* on land in continental Europe, but instead

dissipated their strength on both (Kennedy, 1988). Valuable resources went to the navy, but not enough to win. In the 1689-97 and 1702-14 conflicts France allocated less than 10% of total expenditure to the navy and 57-65% to the army, whilst corresponding British figures were 35% to the navy and 40% to the army (Kennedy, 1988, 115). Alternatively, they could have either (a) focussed on the global dimension and build up overseas power – as they did later to win the American War of Independence; or (b) France could have ignored the global aspect of strategy.

2.27. Stepping back to look over the whole 250 years from 1500-1753, within Europe neither the Habsburg Spanish nor subsequent French bids for European hegemony succeeded. All the while transoceanic European capabilities outside Europe were growing, distributed amongst many powers—Spain, Portugal, the Netherlands, Britain and France—but none of those conflicts had seen significant fighting globally and in none of those conflicts had that global dimension been crucial to the outcome of the central European theatre. That was about to change.

	1700	1750	1800
British Isles	9.0	10.5	16.0
France	19.0	21.5	28.0
Hasburg Empire	8.0	18.0	28.0
Prussia	2.0	6.0	9.5
Russia	17.5	20.0	37.0
Spain	6.0	9.0	11.0
Sweden		1.7	2.3
United Provinces	1.8	1.9	2.0
United States	-	2.0	4.0

Table 2.3a Populations of the Powers, 1700-1800 (millions)

	1690	1710	1756/60	1778	1789	1812/14
Britain	70,000	75,000	200,000		40,000	250,000
France	400,000	350,000	330,000	170,000	180,000	600,000
Habsburg Empire	50,000	100,000	200,000	200,000	300,000	250,000
Prussia	30,000	39,000	195,000	160,000	190,000	270,000
Russia	170,000	220,000	330,000		300,000	500,000
Spain		30,000			50,000	
Sweden		110,000				
United Provinces	71,000	110,000	40,000			
United States	-	-	-	35,000	-	-

Table 2.3b Size of Armies, 1690-1814 (men)

	1689	1739	1756	1779	1790	1815
Britain	100	124	105	90	195	214
Denmark	29	-	-	-	38	-

France	120	50	70	63	81	80
Russia	-	30	-	40	67	40
Spain	-	34	-	48	72	25
Sweden	40	-	-	-	27	-
United Provinces	66	49	-	20	44	-

Table 2.3c Size of Navies, 1689-1815 (ships of the line)

Table 2.3 Population, armies and navies 1589-1815 (Kennedy, 1988)

1754-1939: EUROCENTRIC GLOBAL CONFRONTATIONS

2.28. The Seven Years' War (1754/6-63) was the fourth Anglo-French war since the French bid for European mastery began in 1660 – but crucially for our purposes it was the first *global* conflict. Decisive British global victory over France ushered in a long era of British maritime dominance and of Britain as the leading global power. This helped prevent other global confrontations occurring until World War One some 150 years later. In both these global conflicts—the Seven Years' War and World War One—Europe remained the conflicts' centre of gravity. However, the transfer of power from Europe to the US and Japan during and after World War One would eventually bring this Eurocentric era of global confrontations to an end in World War Two.

The first global confrontation: Seven Years' War (1754/6-1763)¹⁴

2.29. Sir Winston Churchill's chapter on the Seven Years' War bears the title 'The First World War' (Churchill, 1957). It may be considered the first global confrontation not because of high casualties, although likely more than a million people died. It was global because Britain was more globally active than in the earlier conflicts particularly in North America and India, this global dimension mattered more to the outcome of the overall conflict, and when the conflict ended Britain was much more powerful in India and North America.

2.30. **How global was the confrontation?**

- *Europe* was the central theatre and saw war between the great powers. France, Austria, Russia and Sweden were on one side, against Britain and Prussia on the other. This time, the global dimension really mattered for winning the war in Europe because of the financial benefits it brought. The British successfully blockaded the French Atlantic ports, which both throttled French global trade and protected British trade. Moreover, during the *annus mirabilis* of 1759 French colonies fell into British hands across the globe. Vitally, overseas trade increased every year for Britain, but all other combatants' economies suffered (Kennedy, 1988, 146–7).
- *Asia* India was the key Asian battleground. France had been active and gaining power over local states in India. But the Seven Years War saw the

¹⁴ A good case suggests the confrontation actually commenced in 1754 before the formal 1756 Anglo-French declaration of war (Baugh, 2014), which I would term **grey zone** conflict. That grey zone period was pivotal for the war's eventual outcome (Baugh, 2014, 111). For simplicity in the text here I combine these periods of grey zone conflict and war. Recent histories include: (Baugh, 2014; Schumann and Schweizer, 2008; Szabo, 2008).

British smash French power in India, not least through the Battle of Plassey against Indo-French forces. British power in India changed quantitatively. Whilst Britain had been a trading power with powerful arms – now it effectively controlled Bengal and so became a major power *within* India, and perhaps the most powerful power within India. Certainly, that is what played out, as by 1865 the British Empire in India had essentially started as a territorial dominion. Outside India, when Spain joined the war against Britain in 1762 it was defeated in the Philippines and the Caribbean.

- *Americas* Britain fought what is known in the US as the ‘French-Indian War.’ Britain took control of Canada from the French and ended with control all of North America east of the Mississippi. The greatly expanded importance of North America in this conflict compared to only half a century earlier is illustrated by the North American colonies’ rapidly expanding population – from around 200,000 in 1700 to 1.5-2 million by 1750. For context, the whole of England in 1750 had only some five millions, and the British Isles some nine millions.
- *Africa* was of more limited importance, but the British capture of French trading posts in Senegal were important for France’s lucrative slave trade – another brick in the global wall denying French trade.

2.31. **Takeaways from the Seven Years’ War:** Why didn’t the seemingly superior French win? Two key reasons relate directly to Britain’s global strategy.

- (1) *Britain’s leadership had better global strategy that was better implemented.* Prime Minister William Pitt pursued a strategy of paying for armies on the European continent to tie down French forces – coupled with a well-resourced global strategy launching expeditions to take French global possessions. Tying down French forces on the Continent meant in 1760 the French navy received a quarter the sums spent on the army. Moreover, Britain used more professional means of developing strategy, as illustrated by the lack of French records of decision-making compared to copious day-to-day English records (Baugh, 2014, 2).
- (2) *The global dimension gave Britain the financial staying power to win.* Britain could afford to subsidise European armies and keep them in the field. It also distracted French resources from the European theatre.

Dogs that didn’t bark: no global confrontations from 1764-1914

2.32. Why did no global confrontations occur between 1764 and World War One? It was not a lack of conflict, but rather that none went global.

2.33. We can briefly summarise this 150 years before looking at each in more detail. The Anglo-French war over US independence was essentially confined to that theatre. In the two Anglo-French Wars from 1793-1815 British maritime power and success prevented the French going global. From 1815 to the end of the century Britain achieved ‘naval mastery’ and no general European war broke out anyway. The grey zone conflict before World War One involved all the European great powers and could have gone global – but by then the US dominated the Americas, Britain had acquiesced in that US dominance, and the US stood aloof from the confrontation.

Only when World War One pulled in North America did we see the second truly global confrontation.

1778-83 Anglo-French conflict and US independence

- 2.34. France was the strongest country in Europe until 1815, but of the seven Anglo-French wars from 1660-1815 this fifth war was different – and the only French victory.
- 2.35. In 1778 France decisively intervened in the ongoing 1776-83 American Revolutionary War. This time France was not distracted by continental European conflict – it resisted tempting targets in central Europe and poured its resources into the French navy. Naval spending increased from some 30 million livres per year in the Seven Years' War upto 150 million livres in 1780 and 200 million livres by 1782 (Kennedy, 1988, 152).
- 2.36. **Takeaways 1778-83:**
- (1) A *restrained* French strategy that focused only on the maritime dimension was critical to victory – it was the only time the French showed this restraint and the only one of the seven Anglo-French wars from 1660-1815 that they won. In contrast, Britain had shown little restraint in alienating potential continental or maritime powers who could have been at least neutral.
 - (2) Effects on British trade—and thus global trading position—were minimal over the next few years, however, as trade with the newly independent United States grew strongly after independence.

1793-1802 and 1803-1815 French Revolutionary and Napoleonic Wars

- 2.37. France dominated Europe on land for much of this quarter century of conflict, but it could not undermine British naval power particularly after the British naval victory at Trafalgar in 1805. This crucially curtailed the confrontation's global scope. Although the *Americas* featured as Britain steadily took over French Caribbean and in the Anglo-US War of 1812, *Africa* and *Asia* were only minimally involved.¹⁵ This doesn't mean, however, that Britain's global position wasn't an important source of strength.
- 2.38. France sought to use its domination of Europe to cripple Britain's economy using a 'Continental blockade', in which decrees of 1806-7 forbade continental European trade with Britain. But actually, Britain's economic capability to wage war and subsidise a long succession of European armies to fight France was not crippled, not least because of its transoceanic trade outside Europe. Instead, British exports rose from 1794-1816, with total exports of British produce going up from £21.7 million (1794-6) to £37.5 million (1804-6) to £44.4 million (1814-16) (Kennedy, 1988, 160–1, 168).
- 2.39. But whilst British global reach enabled it to stay in the game, the British naval blockade couldn't cripple the French economy because France increased its population via conquest (25m Frenchmen 1789-44m in 1810) and its riches by plunder. As an example, after its defeat at Jena, Prussia paid a penalty of 311m

¹⁵ In 1798 Napoleon landed in Ottoman Egypt, although Nelson's destruction of the French fleet meant little could be achieved. In 1808-10 French raiding also occurred in the Indian ocean, again to no great effect (Taylor, 2012).

francs, equal to half the French government's ordinary revenue; and some half the axes in Italy from 1805-12 went to the French .(Kennedy, 1988, 169–72)

2.40. Takeaways French Revolutionary and Napoleonic Wars:

- (1) Britain's global dominance was economically profitable and provided the financial staying power to bankroll numerous coalitions and armies in continental Europe.
- (2) French plunder from their European victories meant that British control of European trade with the globe affected France less than in the Seven Years War.
- (3) Britain's more trustworthy political culture of paying debts also enabled Britain to borrow more money than France (such aspects of culture are discussed further in Chapter 4)
- (4) France could, once Continental Europe was subdued, have poured resources into a navy rather than land forces on the ill-fated 1812 invasion of Russia.

1815-1904 Global Pax Britannica

- 2.41. From 1815 until after the first world war Britain maintained naval supremacy, and more than that from 1815 until the end of the nineteenth century enjoyed global 'naval mastery' (see Chapter 3). Britain's economic might derived from both the global empire—that at its most extensive just after World War One covered quarter of the globe's land area and a fifth of the world's population—and also Britain's status as the first country to industrialise.
- 2.42. Great power confrontations during this period didn't go global. In the run up to the 1854-6 Crimean War, France had sought to shake up the status quo and Russia had sought to expand at the expense of the weak Ottoman Empire, and following an episode of inadvertent escalation an Anglo-French coalition then fought to oppose Russia. The Wars of German Unification in which Prussia fought Austria (1866) and then France (1870) led to the eclipse of France on the European continent by defeat in the Franco-Prussian war. The 'Scramble for Africa', in which European powers divided up Africa took off in the early 1880s, was moderated by the 1884 Berlin Conference and did not spread further.¹⁶
- 2.43. Crucially in the later nineteenth century other countries now also followed Britain's lead and industrialised. Some like the newly united Germany reaped the benefits of being second movers in industrialisation. At the end of the nineteenth century, as the 'second industrial revolution' involved new technologies like chemicals and electricity, Britain lost its overwhelming economic dominance.
- 2.44. Global takeaways from the global Pax Britannica (1815-1904):**
- (1) Britain benefited economically from the Empire – the burdens did not outweigh the economic benefits to Britain. Britain benefited from extensive markets for its goods. Britain also benefitted from network effects by

¹⁶ This is not to say these confrontations didn't play into global processes or later global confrontations. Events in Africa, for instance, continued after the 1884 Berlin Conference, such as the 1898 Fashoda or 1905 Morocco crises.

constituting the centre of global trade and finance (Farrell and Newman, 2019). Britain stored this wealth like potential energy.

- (2) Industrialisation interacted with Britain's strategic position – reinforcing and then later weakening it. Britain benefitted from being the first country to industrialise, but by the end of the nineteenth century once other powers had industrialised (or begun to industrialise) Britain was simply too small to retain its dominance compared to peers like Germany (whose population was larger than Britain's) let alone much bigger states (in population and geographical terms) like the US and Russia. Digitisation may similarly affect our era.
- (3) Some British policymakers at the end of the nineteenth century anticipated the challenge of size and considered attempting to weld Britain together with the Dominions (e.g. Canada, Australia and New Zealand) into a larger state. Most, however, did not see this as feasible. The thriving political cultures in these states, based on a British model of independent parliamentary democracy rendered that very difficult.

1904-14 Grey Zone confrontation before World War One

- 2.45. *The decade before the First World War (1904-1914)* saw grey zone confrontation with repeated crises between the great powers and alliance construction, as well as competition for influence using multiple instruments of power and over multiple timescales (e.g. within crises and over longer periods (Stein, 2015)). Since 1500 Habsburg Spain and then France had sought European dominance – now it was Germany's turn. But this wasn't a *global* confrontation because the US remained aloof, and by that point the US dominated the Americas.
- 2.46. At the turn of the 20th Century neither British nor German decision-makers wished for a highly antagonistic relationship. But between 1904 and 1911 this came to pass through a sequence of escalating interactions during repeated military and diplomatic confrontations. Both British and German perspectives changed radically between 1904 and 1906.¹⁷ Neither side had seriously considered war between them since the foundation of the German Empire in 1871, but during and after this turning point both frequently did.
- 2.47. **How global was this grey zone confrontation?** *Europe* was again the epicentre of this competition between European states, in particular France and Russia versus Germany and Austro-Hungary. Anglo-German rivalry related to global factors that played directly back into the European theatre. Germany desired *Weltpolitik* or 'World Politics' to get its 'place in the sun', but this involved building a German navy that directly threatened the British Isles (MacMillan, 2014, 74, 80). That naval threat was existential to Britain as the country relied on imports of food and raw materials for survival, and export of goods for economic survival. *Africa* was the stage for two critical crises – the First Morocco Crisis (1905) and the Second Morocco Crisis (1911). *Asia* was involved in multiple ways. The 1902 Anglo-Japanese alliance formally included a power neither European nor from European offshoots, ending Britain's splendid isolation. In the Russo-Japanese war of 1904-5, the Russian defeat

¹⁷ See for example (Paleologue, 1935) (Kennedy, 1980) who describes the flowering of Anglo-German antagonism between 1902-6, or (Clark, 2013) who describes a perhaps reversible crystallisation between 1904-7.

greatly weakened her militarily, led to severe internal turmoil and thus greatly reduced her military weight temporarily in Europe. Asia also played a role through British fears for her Asian empire, for instance from the German Berlin-Baghdad railway (Clark, 2013, 336–8), and indeed Britain decided to join the ‘Triple Entente’ with France and Russia partially though fears over longer-term Russian threats to Britain’s Asiatic empire.

2.48. Crucially, however, the *Americas* were now dominated by the US after the Venezuelan incident with Britain in 1895 and the Spanish-American War shortly after – and the US was barely involved in this broader great power grey zone conflict.¹⁸

2.49. **Global takeaways from pre-World War One Grey Zone confrontation:**

- (1) Economics was critical as Britain could not afford to dominate navally everywhere while conducting the Anglo-German naval race with Germany. Naval forces had to be brought from East Asia to protect home waters.
- (2) Germany’s naval building programme showed a lack of restraint and Germany should not have threatened the British Royal Navy at this point for two reasons: (a) without the Anglo-German naval rivalry it is questionable whether British domestic politics would have enabled it go to war with Germany; (b) Germany split its resources between navy and army, making the same mistake as France from 1660-1763.

	1830	1840	1850	1860	1870	1880	1890	1900	1910	1913	1920	1930	1940
United Kingdom	47%	57%	59%	59%	53%	45%	32%	23%	15%	14%	16%	11%	11%
Germany	4%	4%	3%	9%	13%	16%	16%	21%	20%	21%	14%	14%	17%
France	18%	14%	10%	12%	11%	10%	8%	7%	6%	6%	5%	9%	4%
Russia	13%	8%	6%	3%	2%	2%	3%	6%	5%	6%	1%	6%	13%
Austria-Hungary	6%	6%	6%	4%	4%	3%	4%	4%	4%	4%	-	-	-
Italy	-	-	-	0%	0%	0%	1%	1%	1%	1%	1%	2%	2%
United States	12%	12%	15%	13%	16%	23%	35%	38%	48%	47%	62%	54%	49%
Japan	-	-	-	0%	0%	0%	0%	0%	1%	1%	2%	4%	6%

Table 2.4 Relative share world wealth 1830-1940. From (Mearsheimer, 2003, 220) ‘Wealth’ is measured with a composite indicator that assigns equal weight to iron/steel production and energy production. Minor powers are not included in calculations of world wealth, save for the nineteenth century US.

1914-18 World War One – the second global confrontation

2.50. World War One became global when the United States joined the war in 1917, but it was still a clearly Eurocentric confrontation.

2.51. **How global was World War One?** *Europe* was the central theatre. *Americas*: The US became a belligerent. In *Asia* important campaigns were conducted in the Asiatic Ottoman Empire, whilst German possessions in China were seized. In addition, the

¹⁸ Two authoritative recent histories of the run up to World War One, for instance, contain strikingly little on the US (Clark, 2013, 151–2; MacMillan, 2014)

British mobilized more than a million Indian men for the war. *Africa* saw the fighting over the seizure of German colonies.

2.52. Importantly, the results of World War One were global. The economic centre of the world shifted from London to New York. The Japanese called for a clause on the equality of all races to be inserted into the League of Nations covenant. The US pushed the right of peoples to self-determination and the need for a global system of international co-operation, which was embodied in the League of Nations. Specific regions across the globe were also impacted, from the Sykes-Picot agreement over formerly Ottoman Asia to the Treaty of Versailles redrawing the European map.

2.53. **Global takeaways from World War One:**

- (1) Britain’s vast global stores of wealth enabled her to outspend her adversaries and win a long, gruelling war (Table 2.5).
- (2) Crucially, however, this time the nature of the global system meant that unlike in the Seven Years War or Revolutionary/Napoleonic wars Britain didn’t come out an economic winner – why? This time ‘**third parties**’—the US and Japan—benefited from the spending of British wealth to win the war. These third parties ended up the real winners. This time Britain wasn’t banker to European coalition, but made the US wealthy – and indeed Japan was boosted economically by World War One even more than the US.

	War Expenditure at 1913 Prices (billions of dollars)	Total Mobilized Forces (millions)
British Empire	23.0	9.5
France	9.3	8.2
Russia	5.4	13.0
Italy	3.2	5.6
United States	17.1	3.8
Other Allies*	-0.3	2.6
Total Allies	57.7	40.7
Germany	19.9	13.25
Austria-Hungary	4.7	9.0
Bulgaria, Turkey	0.1	2.85
Total Central Powers	24.7	25.1

Table 2.5 World War One War expenditure and total mobilized forces, 1914-19. (Kennedy, 1988, 354) *Belgium, Romania, Portugal, Greece, Serbia

1931-39 Grey Zone confrontation before-World War Two

2.54. Grey zone confrontations occurred on every continent bar the Americas, which was dominated by an isolationist US that increased its grip over the Americas. But whilst this grey zone confrontation didn’t spread to the Americas, global economic integration meant that the US Wall Street Crash and Great Depression preceding this conflict had gone global and profoundly affected Europe and Asia (e.g. 1930s German and Japanese domestic politics).

- 2.55. **How global was the confrontation?** *Asia*: In 1931 Japan used the pretext of the 'Mukden incident' to invade the Chinese region of Manchuria. In 1932 it renamed the area Manchukuo and set up a puppet government recognised by Italy, Spain and Germany. In 1933 following League of Nations censure, Japan withdrew from the League. In 1937 the 'Marco Polo Bridge Incident' led to the Japanese invasion of China. Japanese-Soviet border clashes also occurred, with a particularly sizable episode in 1939. *Africa*: 1935 Italian invasion of Abyssinia, which prompted League of National sanctions that in turn prompted Italian withdrawal from the League. *Europe*: Nazi Germany used subversion, stoked ethnic tensions in neighbouring states and used *fait accomplis* (Handel, 1981). Ambiguity was key for the German military build-up before and after Hitler gained power (Gilbert, 2001). The USSR, Germany and other great powers engaged in proxy conflict during the brutal Spanish Civil War (Smoke, 1977).
- 2.56. But in the *Americas* the US sought to isolate itself from entanglements outside the Americas—perhaps most strikingly the Neutrality Acts—whilst simultaneously increasing its power over other states in the Americas (Braumoeller, 2010).
- 2.57. **Global takeaways 1931-39:**
- (1) Britain's global role was now a millstone—in particular the costs of defending the Asiatic Empire against an industrialized Japan became very high—but there were no easy answers to the strategic dilemma it posed. Britain's only potential allies were France and the rest of the British Empire. However, France required central European commitments that the Dominions strongly opposed and that the edifice of global defence could not help with, whilst global commitments required attention and resources that distracted from German threat.
 - (2) Hitler's Germany spent furiously and unsustainably on armaments in the late 1930s that could only be paid for via conquest – and Britain had to try and match that **extreme actor**, which would economically cripple her because rather than building her own economy Britain she would instead boost a **third party**, the US. The frantic pace of German spending is illustrated by the army size swelling from a supposed 7 divisions in 1933 (albeit secretly planned to rise to 21 divisions) to a ceiling of 36 by 1935, and then totalled 71 in late 1938 and 103 divisions in 1939. Air and naval forces similarly exploded in size and planned more – and the planned fleet would have required as much oil as all Germany in 1938, whilst the planned airforce by 1942 would require 85% of all *world* oil production (Kennedy, 1988, 394–6).

1939-PRESENT: GLOBAL CONFRONTATIONS WAGED WITH CULTURALLY NON-EUROPEAN GREAT POWERS

- 2.58. The third epoch of global confrontations—in which we now live—began with the second world war. Every continent was deeply involved, but now for the first time the war was fought with a central great power protagonist whose *culture was neither European nor a European offshoot: Japan*. The Cold War that followed was a fourth global confrontation and again a central great power protagonist—this time *China*—was again clearly neither from Europe nor a European offshoot. As we enter a new period of grey zone competition since 2014, China is again a central protagonist.

1939-45 World War Two – a third global confrontation

- 2.59. War raged across *Europe, Asia*, the *North African* desert, and as the US entry brought in the Americas the war became a global confrontation. Conflict was far more extensive in Asia than had been the case in World War One, making this a more deeply global conflict. Unlike the First World War a central protagonist—Japan—was clearly a non-European culture.
- 2.60. **Global takeaways from World War Two:**
- (1) *Global blockade could only be limited in effect:* The British blockade of Germany was not possible whilst no Eastern front existed after German-USSR pact of 1939. Furthermore, Germany could supply its war economy via plunder of its very much larger conquests than in World War One.
 - (2) *Global third party as the real winner:* Britain spent her wealth to the huge benefit of a third party: the US. Moreover, Britain faced the entirely plausible scenario of a US return to some degree of isolationism (as the US had before) leaving Britain facing the central burden of facing the Soviet Union.
 - (3) *Terrible global strategy mattered:* Appallingly bad global strategic coordination between Japan and Germany contributed to the failure what passed for their global strategy – they could and should have cooperated in attacking Russia rather than involving the US.

1945-91 The Cold War - the fourth global confrontation

- 2.61. *The Cold War*, as the name itself attests, was more than peaceful competition but was not a hot war between the West and the USSR. As a global confrontation it meaningfully involved every continent (Gaddis, 2005; Westad, 2017). A clearly culturally non-European great power, China, would also be a key protagonist. The Sino-Soviet border confrontation in 1969 and Chinese realignment with the US was a crucial factor in the Cold War.
- 2.62. **How global was the Cold War?** *Europe* was a central theatre in every decade from the 1940s to the 1980s. To the Soviets, at least, Europe also began the Cold War under Stalin as the dominant theatre (Gaddis, 2005; Westad, 2017). *Asia* was crucial, as shown just by listing key events: the Korean war, the Vietnam conflict, the consolidation of a Communist People's Republic of China, the Sino-Soviet split, Nixon in China, middle eastern wars, the Iranian Revolution, India and the non-aligned movement, the economic rise of Japan and so on. *Africa's* decolonisation and European withdrawal saw Cold War interventions by both superpowers, which ranged from the 1960 Congo crisis and numerous proxy wars to competition over who would fund the Egyptian Aswan High Dam project. Events in Africa were seen as significant indicators of Soviet intent under US President Jimmy Carter's administration (Yarhi-Milo, 2013, 22–4). The *Americas* were home to one of the Cold War's superpower protagonists: the US. Whilst US power meant the Americas were otherwise the least directly involved continent, it did see the Cuban missile crisis and key domestic
- 2.63. **Global takeaways from the Cold War:**

- (1) *The US made the global aspect of its strategy pay—going global was a bonus not a drain on US resources—and the US was also careful not to give too much economic help to third parties. Thus the US had the money to wage the long Cold War.* (a) This partly involved helping third parties, e.g. the Marshall plan built up European allies and markets for American exports, or Japan that got huge economic boosts from US help (Westad, 2017). (b) But that was balanced by not allowing too much economic advantage to third parties, illustrated by the floating of the US exchange rate under President Nixon to prevent a now very wealthy Japan gain too great a benefit (indeed, it became richer than the US per capita). In terms of third parties the US was also lucky that no countries more populous than itself industrialized, and by the 1980s began to digitize – as that would have been a huge threat (cf the PRC now). (c) The US benefitted from being a critical centre of many global networks (Farrell and Newman, 2019)
- (2) More realistic grasp of others’ decision-making globally than the Soviet Union, and involuntary parts of the US model were more attractive. The Soviets were not fundamentally popular and had no real model for the future by the 1980s. They did not understand Islamists.
- (3) Why did Britain not lean against the US, as the Soviets anticipated they would and as France to some extent did? Partly Soviet threat, partly the need to keep the US, and partly culture (political system and more). A good case can be made that Britain should have felt equally threatened by the US as by all the previous threats detailed over the preceding half millennium. Instead, Britain feared US leaving more than US overpowering – it is at least plausible that cultural affinity played a role.

	Total GNP	Per Capita GNP
United States	381 billion	2536
USSR	126	699
UK	71	1393 (1951)
France	50	1172
West Germany	48	1001
Japan	32	382
Italy	29	626 (1951)

Table 2.6 Total GNP and Per capita GNP of the Powers 1950

	1945	1950	1955	1960	1965	1970	1975	1980	1985	1990
United States	84%	78%	72%	67%	67%	65%	63%	65%	66%	68%
Soviet Union	16%	22%	28%	33%	33%	35%	37%	35%	34%	32%

Table 2.7 Relative share of superpower wealth, 1945-90

2014-present Contemporary great power grey zone confrontation

- 2.64. During its unipolar moment after 1990 the U.S. faced no great power rivals. This gradually changed in the early 2000s with a resurgent Russia under Vladimir Putin and a rising China. Whilst choosing a precise tipping point is somewhat arbitrary, 2014 provides a natural juncture. Regarding Russia, 2014 saw Russia seize part of Ukraine, a country of some 50 million people that the U.S. had not long before argued should become a NATO member (Erlanger, 2008). Regarding China, Deng Xiaoping's reported dictum that China should 'hide its light and bide its time' appeared to guide foreign policy from the 1980s. However, after Xi Jinping assumed power in 2012 China began to turn towards authoritarianism at home and a more assertive foreign policy abroad (Economy, 2018). Intensity of competition has increased in specific military flashpoints, notably in the East China sea with Japan (Wright and Schoff, 2014) and the China South China Sea with numerous actors. This new foreign policy trajectory became increasingly apparent to outside observers between coming to office 2012 and Xi's 2017 speech confirming China's new course (Doshi, 2017) – precisely when to draw a line is difficult but 2014 provides a convenient midway point in this period. In many ways, the US was conducting a global Grey Zone confrontation with the Global War on Terror, and before that with democracy promotion.
- 2.65. **How global?** *Europe* is involved through Russian activities in East Ukraine, but Europe is not the broader confrontation's centre of gravity as it might have been a century before. The *Americas* are involved as the US is key. *Asia* is the site of confrontations in the South and East China seas. However, whilst *Africa* is witness to activities such as the Chinese military base in Djibouti or Russian influence in the Central African Republic¹⁹, compared to, for instance, eighteenth, nineteenth or twentieth century conflicts these African activities are hardly of sufficient intensity to render the confrontation global.
- 2.66. **Takeaways:**
- (1) Africa has often been the continent least involved in the last 500 years of global and multi-regional confrontations. Whilst both vast and rich in natural resources, it has mostly remained much less economically developed than Europe, Asia or the Americas.
 - (2) Which third party has the capability to benefit from great power competition globally? Europe might, if the United States is not careful then the real beneficiary from US confrontation with China would be European Union – who while not being a great power itself and unlikely to become one (e.g. Germany refuses economic integration) it may end up benefiting from US competitive spending and so decrease US relative power.
 - (3) Increasing global connectivity may draw everybody in. Just as transoceanic changed the game, even with Asia that had been linked to Europe and the middle east before. Now global scale communications. Even if Africa or Europe didn't want to pick sides, they might be drawn in just by using one side's digital ecosystem.

¹⁹ <https://besacenter.org/perspectives-papers/russia-china-influence-africa/>
<https://www.cnbc.com/2019/06/14/vladimir-putin-muscles-into-africa-which-is-bad-news-for-us-interests.html>

Box 2.1 Global War on Terror (2001-present)²⁰

Whilst it was not between great power adversaries, this confrontation was global. At the joint session of Congress following the September 11 2001 World Trade Centre attacks, for instance, President Bush said that ‘every nation, in every region, now has a decision to make. Either you are with us, or you are with the terrorists.’ (quoted in (Boyle, 2008)).

One can also argue that it did involve a confrontation between clear adversaries, as articulated by scholar and practitioner David Kilcullen: ‘there is a global jihadist movement, but it comprises a loosely aligned confederation of independent networks and movements, not a single unified organization. Global players link and exploit local players through regional affiliates – they rarely interact directly with local players, but sponsor and support them through intermediaries. Each theater has operational players who are able to tap into the global jihad, and these tend to be regional Al Qaeda affiliates.’ (Kilcullen, 2005, 602)

²⁰ Whilst its start date is clear, how far the GWOT is still ongoing is more complicated. The 2018 US National Defense Strategy, for instance, still lists China, Russia, North Korea, Iran, and terrorists as the five key challenges, but with a focus more on China and Russia.

Chapter 3 Making global strategy

- 3.1. Strategy is the art of creating power. ‘Global strategy’ involves important activities and interests in all the continents that contain a significant fraction of the world’s population.
- 3.2. This chapter first discusses what global strategy is (and isn’t), and what types of powers make global strategy.
- 3.3. Then I discuss four rules for making global strategy:
 - (1) Adopt a ‘global mindset.’
 - (2) Harness ‘global system effects’, not just actor-specific effects.
 - (3) The US domestic system’s characteristics crucially drive US global influence – and buttressing US domestic resilience is key.
 - (4) Global strategy requires both a global ‘script’ and focal expertise.

WHAT GLOBAL STRATEGY DOES (AND DOESN’T) MEAN

- 3.4. Strategy is the art of creating power (Freedman, 2013). Power consists of the ability to influence another’s choice or to exert control by removing their capability to choose.²¹ In Chapter 1 I defined ‘**global**’ as meaningfully involving all the world’s continents on which significant fractions of the world’s population live. In our contemporary world, any state can thus, if they desire, have some kind of global strategy with at least a global dimension.
- 3.5. But what global strategy *can* mean for states differs markedly depending on their capability. The most critical distinction for US policymakers is between what global strategy can mean for a *superpower* (the US is the sole current superpower), and for lesser powers that—although still potentially very capable—cannot on their own conduct the same type of global strategy.
- 3.6. Firstly, a ‘superpower’ is a power greater than a traditional ‘great power’, with great mobility of power and global reach. Essentially, a superpower is a great power on every continent, or a ‘global great power.’
 - Only superpowers (i.e. now only the US) can conduct a *global great power strategy*, which I define as conducting strategy that involves important multi-domain activities and interests in all the continents that contain a significant fraction of the world’s population.
 - A superpower has more global options (and responsibilities) than lesser powers and it can plausibly—indeed routinely—shape the global system to achieve its objectives. Examples include blockades, network effects, limiting ‘third party’ profiteers, or remaking the global system across all four of its faces: political, economic, social and cultural.
- 3.7. Second, lesser powers—including great powers like Russia, China, Japan, Germany, the UK or France—can conduct strategies with *global dimensions*, such as in global cyber. A ‘great power’ is one deemed to rank amongst the most powerful in a

²¹ (Armitage and Nye, 2007) p. 6 ‘Power is the ability to influence the behavior of others to get a desired outcome.’ For discussion of the distinction between influence and control, see e.g. (Schelling, 1966) Ch. 1.

hierarchical state-system, or a state capable of holding its own against any other nation. Such a strategy can aim to:

- directly affect highly globalised sub-systems within the global system, such as global finance, global cyber, outer space;
 - cause worldwide influence on an aspect of the global system, for example Russia breaking norms for global effect.
- 3.8. US policymakers thus face the unique challenge of making a global great power strategy now, with its specific risks and opportunities, although Chinese strategists will likely soon be doing so too as discussed below.
- 3.9. US policymakers must also appreciate that existing scales for strategy don't capture the challenge of conducting strategy on a global scale.

'Global' is not captured by existing scales for strategy

- 3.10. 'Global' is not captured by existing scales for strategy. This doesn't mean other scales aren't important, but US policymakers applying them alone may miss global scale threats and opportunities.
- 3.11. US doctrine, for instance, includes a commonplace framework **with 'tactical, operational and strategic' levels of war**. However, even for powerful states like Russia or China that framework's highest level need not be global. The strategic level of analysis refers to national war plans and outcomes, which cannot be global for many states and need not be global on all occasions for the US. The operational level involves decisions and outcomes in specific campaigns of a war, and the tactical level refers to objectives and techniques adopted in engagements within a campaign.
- 3.12. **'Grand strategy'**²² can be had by any country – Greece can have a grand strategy. It need not be global. Moreover, only for the US now could grand strategy potentially be synonymous with global strategy. Grand strategy is a broad concept, defined by scholar Barry Posen as a 'nation-state's theory about how to produce security for itself.' '[N]ot a rule book,' it is a 'set of concepts and arguments that need to be revisited regularly.' (Posen, 2014, 1) Similarly, scholar Hal Brands explains grand strategy 'as the intellectual architecture that gives form and structure to foreign policy.' Decisionmakers undertaking grand strategy 'are not simply reacting to events or handling them on a case-by-case basis. Rather, a grand strategy is a purposeful and coherent set of ideas about what a nation seeks to accomplish in the world, and how it should go about doing so.' (Brands, 2014, 3)
- 3.13. **US Presidential foreign policy 'doctrines'** do not have to be global.²³ Indeed, the 'Monroe Doctrine' was an explicitly regional idea for the Americas, as was President Theodore Roosevelt's 1904 corollary to it. To be sure, the Truman doctrine and its successors were global. But whether some presidents even have a 'doctrine' is debated, most recently President Barak Obama (Drezner, 2011). Moreover, a future isolationist presidential doctrine drawing the US back to the Americas is hardly fantastical.

²² For further discussion of the concept of grand strategy see e.g. (Silove, 2018; van Hooft, 2017).

²³ For discussion of various 'doctrines' see e.g. the special issue introduced by (Brands, 2006).

- 3.14. Nor is global synonymous with the highest of the **‘levels of analysis’ in many academic disciplines**. Consider *economics*. ‘Microeconomics’ focuses on the actions of individual agents within the economy (like households, workers, and businesses); whilst macroeconomics considers the economy as a whole (e.g. growth of production, unemployment rate, price inflation, government deficits or trade). But macroeconomics typically relates to a nation, for instance considering only the British economy or the American economy, and it does not have to be (and rarely is) global (Rodrigo, 2018). Consider health. For much of medicine the unit of analysis is the individual human, whilst in the fields of public health or epidemiology the unit of analysis is the population level. But that isn’t usually global.
- 3.15. International relations theories contain many different ways of thinking about ‘levels of analysis’. In classic scholarly work Arnold Wolfers proposed two levels, Kenneth Waltz three levels, James Rosenau five levels and to complete the sequence noted by Robert Jervis he proposes four levels of which the highest is the international environment (Jervis, 1976, 15). When Lichtenstein and Austria interact it’s international but clearly not global. The ‘international system’ or ‘global society’ that is studied does not actually have to be global in scale. Some argue their work becomes ‘global’ in the sense that they introduce non-Western perspectives or deal with transnational interdependence and so on (Hurrell, 2016) – these are important points, but that can all occur without working at a global scale.

Policy implications:

- (1) The US is currently the only country that can enact a global strategy – with the strengths and weaknesses that flow from this currently unique position.
- (2) Global strategy should be a distinct perspective, which differs from the ‘strategic/operational/tactical’ levels or ‘grand strategy.’

WHAT ‘GLOBAL GREAT POWERS’ (I.E. SUPERPOWERS) HAVE EXISTED – AND WHAT GLOBAL STRATEGIES?

- 3.16. Classification of powers It is useful to denote a superpower when thinking about global strategy, not only for US policymakers as the US is a superpower, but also because China may become a superpower reasonably soon. Of the 193 member states of the United Nations:
- **Global great power, aka superpower:**²⁴ Currently only the US. Discussed below.
 - **Great power:** .Currently e.g. China, Russia, Japan, Germany, the UK or France. A state deemed to rank amongst the most powerful in a hierarchal state-system, and so capable of holding its own against any other nation. Great powers must have first rank military prowess, which forms part of their political power, and sufficient economic power to underpin these other capabilities.
 - **Middle and Minor powers:** These can be crucial, e.g. Serbia before World War One.

²⁴ Israel might be called a ‘regional superpower’, but obviously requires the qualifier ‘regional.’ China might be called an AI ‘superpower’ Habsburg Spain has been described by as a ‘superpower’

- 3.17. **Superpower:** William Fox (1944) used the term to indicate a power greater than a traditional 'great power' and that possessed great power 'plus great mobility of power.' Which superpowers have existed depends on one's definition of power, but three pretty clear cases are Britain (1815-1900/1945), the Soviet Union during the Cold War and the United States from 1945 to the present. These cases suggest a superpower requires: (1) global reach; (2) actual and not just potential global military power (e.g. the late nineteenth century US economy was gigantic but the navy was US smaller than Chile); (3) global political and cultural power; and (4) sufficient economic or productive power, relative to other powers across the globe, to underpin these other capabilities. These three cases also suggest two other features of superpowers worth bearing in mind: (1) A superpower need not be able to win militarily immediately everywhere. Mid-nineteenth century Britain was clearly a superpower, but Prussian Chancellor Bismarck could note that call out the firebrigade and would likely win a longer conflict—and of course it won both world wars—but even at its height Britain's power was not immediately dominating or decisive on every continent. (2) More than one superpower can exist in the world at the same time, as happened during the Cold War. Thus, 'superpower' doesn't mean 'hegemon,' which designates one state's dominance over all others. Indeed, whilst Britain might be called a nineteenth century global hegemon it was not really a European regional hegemon. The US went from regional hegemony in the Americas to Cold War competition with the superpower USSR and then to global hegemony.

The three historical cases of global great powers: Britain, US and USSR

- 3.18. In all three cases these superpowers met the four criteria noted above: (1) global reach; (2) Military power; (3) global political and cultural power; and (4) sufficient economic underpinnings for that power. I give Britain as an example, which also illustrates how far China—whilst impressive—now is from superpower status.
- 3.19. (1) Britain had global reach: In *Europe* it was a great power, with Duke of Wellington defeating Napoleon at Waterloo and Britain constructing and financing the repeated alliances that won quarter century of French Revolutionary/Napoleonic wars in which France dominated much of the European continent. Britain was a major factor in the power calculations of all European great powers from 1815 to the mid-twentieth century. In *Asia* it governed India that provided a huge army, and was a power all across Asia from the West (where it was a critical factor in the Ottoman Empire) to the South East Asia (e.g. founding Singapore) up to North East Asia and China. In *Africa* it had extensive and important territories from the Cape in southern Africa to Egypt and the Suez canal. In the *Americas* it had Canada, Caribbean territories and high levels of control over key South American regimes. Trade and control over strategic chokepoints—Suez, Malacca, Aden, Hormuz, Gibraltar were all British.
- 3.20. (2) Military power: It had a large land army in Asia due to the Indian Army. However, crucially the Royal Navy was number one from the mid-eighteenth century, and from 1815 had 'naval mastery' that went essentially unchallenged until the run up to World War One.

- Historian Paul Kennedy²⁵ distinguishes “naval mastery” from temporary, local naval superiority, or local command of the sea. “By . . . the term ‘naval mastery’, however, there is meant here something stronger, more exclusive and wider-ranging; namely a situation in which a country has so developed its maritime strength that it is superior to any rival power, and that its predominance is or could be exerted far outside its home waters, with the result that it is extremely difficult for other, lesser states to undertake maritime operations or trade without at least its tacit consent. It does *not* necessarily imply a superiority over all other navies combined, nor does it mean that this country could not temporarily lose local command of the sea; but it does assume the possession of an overall maritime power such that small-scale defeats overseas would soon be reversed by the dispatch of naval forces sufficient to eradicate the enemy’s challenge. Generally speaking, naval mastery is also taken to imply that the nation achieving it will usually be very favourably endowed with many fleet bases, a large merchant marine, considerable national wealth, etc., all of which indicates influence at a global rather than a purely regional level.”
- 3.21. (3) Global political and cultural power: Empire direct political control over a fifth of the world’s population and a quarter of it’s land. Indirect control over far more. Wilberforce and first international movement slavery. Britain to enforce freedom of navigation and oppose slavery and piracy. Constitutional monarchy and Parliamentary system was a powerful model, the other being Revolutionary France. As the first country to industrialise, its social practices modernity. Mass sports.
- 3.22. (4) Economic and financial power: Britain fought xx wars against Europe’s dominant power, France (list Kennedy) and superior ability to collect taxes and borrow to finance war than France during eighteenth century (Kennedy p102). In the nineteenth century Britain was the first to industrialise, so became richer in GNP per capita and manufacturing (although not overall) – for instance zenith around 1860 53% of world’s iron, consumed about half the globe’s raw cotton output (p192). Far exceeded Europe, and Europe far exceeded the rest of the world. Navy and economics reinforced each other.

HOW DOES ONE MAKE GLOBAL STRATEGY?

- 3.23. Lawrence Freedman’s magisterial work on strategy across the military, socio-political and business realms describes how:

‘As a practical matter strategy is best understood modestly, as moving to the next stage rather than to a definitive or permanent conclusion. The next stage is one that can be realistically reached from the current stage. . . . This does not mean it is easy to manage without a view of a desired end state. Without some sense of where the journey should be leading.’ (Freedman, 2013)

- 3.24. With this in mind, I describe four recommendations to help make global strategy.

(1) Adopt a ‘global mindset’

²⁵ Paul M. Kennedy, *The Rise and Fall of British Naval Mastery* (London: Macmillan, 1983, first published in 1976 by Allen Lane), p. 9.

- 3.25. Global isn't just the sum of regional or functional (e.g. cyber) or state-level challenges – and 'global' should a key perspective taken when making strategy. Methods include: Internal branding and senior "global champions" to get analysts into the habit of think globally, and seeing global challenges and opportunities. Enhance global expertise by creating more roles that are global in scope, including within regional centers (e.g. EUCOM) and functional centers (e.g. STRATCOM). Create networks connecting regional offices (e.g. formal and informal "buddy" schemes).

(2) Harness 'global system effects', not just actor-specific effects

- 3.26. The global system is a system-of-systems whose interconnections can cause intended and unintended effects. Harness indirect effects. The US may most decisively influence China, for instance, via actions with Russia, global finance or Japan.
- 3.27. Chapter 2 discusses examples of system effects through the history of global confrontations.

(3) The US domestic system's appeal drives US influence – buttress it

- 3.28. *The US domestic system's characteristics crucially drive US global influence – and buttressing US domestic resilience is key.* Artificial Intelligence driven global competition between digital domestic political regimes illustrates this imperative (Wright, 2019, *AI, China Russia and the Global Order*). The US model influences swing states, allies and adversaries who may emulate or avoid its model. US domestic system also provides data for others to assess US capabilities and intentions.

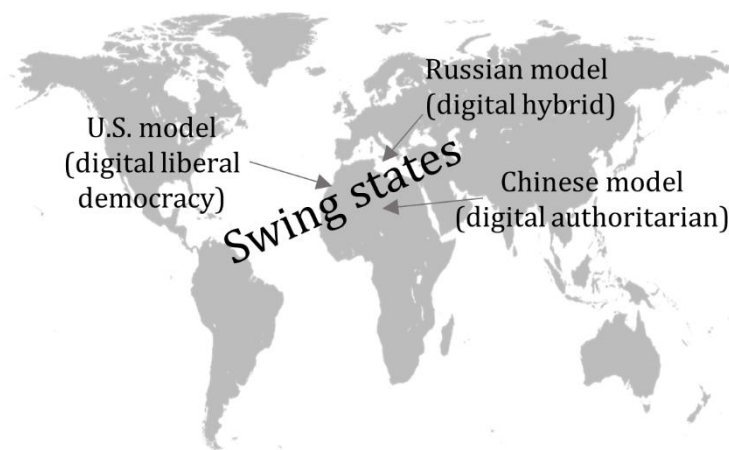


Figure 3.1 Global competition between competing regime types.

(4) Global strategy requires both a global 'script' and focal expertise

- 3.29. The Great Game in Central Asia was fought by the vast nineteenth century British and Russian Empires – but also required detailed local knowledge. So too today. Global strategy today requires US analysts to put themselves in the shoes of key

audiences: competitors like China or Russia; allies like the UK or Japan; and swing states. Putting oneself in the shoes of others across the vast globe is tough and requires practical tools. One potentially crucial dimension richness of global cultural diversity – but does that rich cultural diversity actually matter and, if so, how?

Thinking ‘outside-in’: the checklist for empathy

- 3.30. To influence an Afghan farmer not to grow poppy, the influencer must consider that course of action and its alternatives from the audience’s perspective.²⁶ If the aim is to deter a hostile State, i.e. influence it not to act, then the influencer must estimate how the hostile State perceives the costs and benefits of acting – and of not acting.²⁷
- 3.31. Embracing an outside-in perspective—a mindset that starts with the audience and focuses on creatively delivering something it values—brings benefits relative to an inside-out mindset focused on internal processes that push out products to the audience.²⁸ In business, this has been a staple of marketing since Harvard Marketing professor Theodore Levitt’s 1960 article Marketing Myopia.²⁹ In a more recent study, customer-driven companies doubled the shareholder returns compared to shareholder-driven ones³⁰ and the advantages are even more marked in the most challenging and turbulent markets.³¹ In international relations, a key recommendation of Joseph Nye’s seminal 2004 book on power and influence is, “To put it bluntly, to communicate more effectively, Americans need to listen.”³²

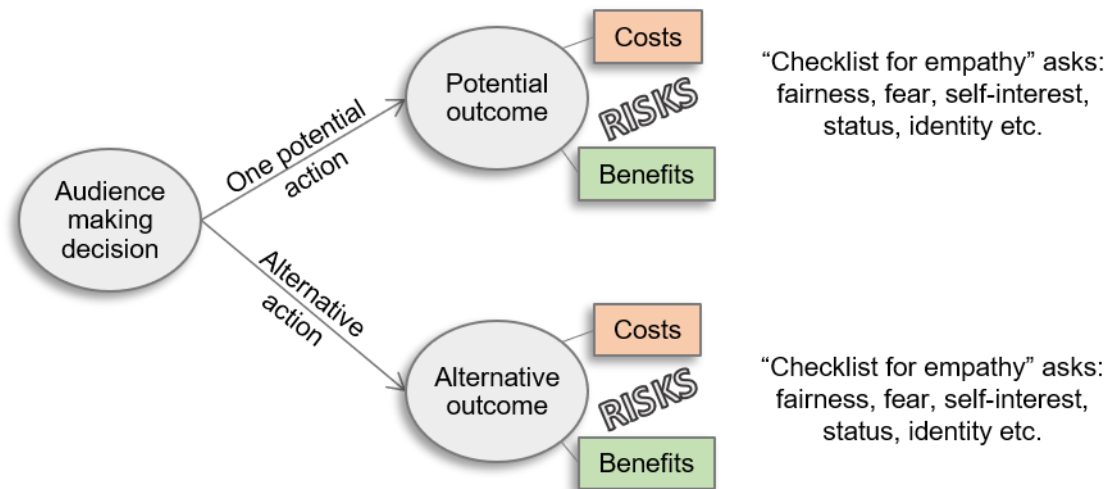


Figure 3.5 The audience decision process. The audience’s decision calculus must be at the heart of planning for influence. Practical tools, based in evidence, can help put oneself in the audience’s shoes (e.g. the “checklist for empathy” described in Wright (2019) *From Control to Influence*).

²⁶ This subsection draws on Wright (2019) *From Control to Influence*. Please see that report for detailed discussion of the rationale and how to implement such influence. www.intelligentbiology.co.uk

²⁷ Lawrence Freedman, *Deterrence* (Cambridge: Polity, 2004).

²⁸ The evidence is reviewed in Wright (2019) *From Control to Influence*

²⁹ Levitt, T. ‘Marketing Myopia’, *Harvard Business Review*, July-August, 1960, p.45

³⁰ Ellsworth, R. (2002) *Leading with Purpose*, The New Corporate Realities, Stanford Business Books

³¹ Gulati, R. (2009) ‘Reorganise for resilience: Putting customers at the centre of your organisation’, Harvard Business Press

³² Nye, JS. (2004) *Soft Power: The Means to Success in World Politics*, Public Affairs

- 3.32. Influence aims to shape behaviour either immediately or in the future, which requires understanding the audience's decision-making process as shown in Figure 3.5. The decision the audience faces must be at the heart of planning for influence. Influence is affecting an audience's decision-making process, where that audience can decide between options. The influencer should explicitly estimate that action's perceived costs and benefits and the perceived costs and benefits of alternatives. This includes realistic, conscious and unconscious as well as "irrational" motivations, for example fear, fairness and identity (e.g. Chapter 6).
- 3.33. Thinking outside-in seems obvious, yet businesses and governments often fail to do it. One important reason for this is the unavoidable force in any bureaucracy to focus internally on process and known routines.³³ Humans are also predisposed to think egocentrically.³⁴

Culture – East Asia and the West

- 3.34. Another challenge for U.S. planners trying to place themselves in the shoes of others half a world away is culture. Does strategic thinking differ between East Asian countries, such as North Korea or China, and the U.S.? Does what is common sense and intuitively plausible really differ between such cultures? Identifying such differences would help tailor influence strategies. Influential voices argue, for instance, that strategic thought differs between China and the West, rooted in millennia of cultural difference leading to different worldviews. Henry Kissinger wrote in *'On China'* that 'No other country can claim so long a continuous civilization, or such an intimate link to its ancient past and classical principles of strategy and statesmanship', and argued its cultural tradition shaped leaders such as Mao Zedong, Wen Jiabao and Hu Jintao.³⁵ The authoritative Chinese military textbook *The Science of Military Strategy* states that 'The cultural tradition of all nations, especially the national cultural psychology has significance on the process of development of strategic theories.'³⁶
- 3.35. But it has been devilishly difficult to determine whether, and how, cultural differences affect behavior. Thus, next chapter and Parts II and III examines culture.

Box 3.1: Intentions at global scale: the hierarchical nature of strategy

What is intent, and what is intent at the global scale?

Definitions from two recent papers in a leading scholarly journal are:

- Yahri-Milo 2013: 'The foreign policy plans of the adversary with respect to the status quo. This can be expansionist (strong determination to expand power and influence beyond territorial borders), opportunistic (will take opportunities but do not actively seek change or high cost) or status quo (only want to maintain relative power position).'

³³ Graham Allison and Philip Zelikow, *Essence of Decision: Explaining the Cuban Missile Crisis*, 2nd ed. (Pearson, 1999).

³⁴ M. H. Bazerman et al., "Negotiation," *Annual Review of Psychology* 51 (2000): 279–314, <https://doi.org/10.1146/annurev.psych.51.1.279>.

³⁵ Henry Kissinger, *On China* (Penguin, 2011). Quote from p. 2, see also e.g. pp. 3, 103, 490.

³⁶ Guangqian Peng and Youzhi Yao, *The Science of Military Strategy* (Beijing: Military Science Publishing House, 2005). p. 128.

- Rosato 2015 ‘the actions that a state plans to take under certain circumstances.’ Categories can include peaceful/aggressive, over any time period, in any sphere of activity (e.g. economic).

However, if one attempts to understand an adversary’s intentions during Grey Zone competition in a particular ‘swing state’, then examples of intentions might include ‘create confusion’, ‘sow discord’ and ‘undermine the legitimacy of Government.’

Thus, I suggest using a ***hierarchical*** concept of intention. This can include intentions at the highest scale employed by the actor, (e.g. expansionist, opportunistic, status quo) and then operational level intentions (“create confusion”, “sow discord” and “undermine the legitimacy of Government”) as well as more ‘tactical’ intentions at a lower level.

Artificial intelligence and neuroscience models of hierarchical intentions:

Mathematical models of adversaries that are hierarchical are being developed in computational neuroscience, e.g. related to the “free energy principle” Also note e.g. (Chambon et al., 2017; Diaconescu et al., 2014; Sevgi et al., 2016)

Chapter 4 Cultures and global strategy

'Custom is king of all' – Herodotus (fifth century BCE)

'Mankind, in general, judge more by their eyes than their hands; for all can see the appearance but few can touch the reality.' – Nicolo Machiavelli, *The Prince* (1532)

- 4.1. Culture is the ideas, customs, and social behaviour of a human group and reflects 'how things are done around here.'
 - Diverse disciplines study culture at different scales of human organisation—from individual cognition to states' political or strategic cultures, to global "clash of civilisations"—and all agree that culture is slippery to define or measure. But many assert that culture matters profoundly.
 - cognitive
- 4.2. Culture can be used to improve and understand:
 - Deterrence at different scales of human organization (e.g. individuals, organizations, states and the global system);
 - Global grey zone competition.
- 4.3. In this chapter I first discuss key messages from the chapter and a number of common themes across disciplines. I then examine culture at five different scales from the individual to global scale. For each scale I ask how the concept of culture is understood, and what evidence exists about whether culture matters and, if so, in what specific ways.

INTRODUCTION AND KEY MESSAGES

- 4.4. Understanding culture is hard because of four S's. Culture seems *squishy*, one cannot simply count it like the number of people or telephones in a region. It often seems the *soft-side* of 'hard' factors like economics or the law. Laws, plans or procedures may be clearly written but what they actually mean rests also on their interpretation. Culture has an inherently *subjective* dimension, consisting at least in part of ideas, attitudes or customs. Finally, culture is often studied in a *siloesd* way by multiple disciplines that necessarily get absorbed in their own challenges and preoccupations.
- 4.5. Thus, here I break down these silos a little and put together many of these bodies of work—each often wonderful in its own right—to form a mutually-reinforcing framework more helpful to policymakers than the sum of the parts. We will also see how studying culture is tough in all disciplines, but some disciplines can provide *more* replicable and robust findings—in particular cross-cultural cognition because we can rigorously repeat experiments—and given culture's central cognitive foundation across disciplines that helps give them a solid foundation.
- 4.6. The profusion of cultural studies can seem bewildering – and thus to help orientate the reader from where they've been to where they are going, this chapter follows an intuitive path through the different disciplines studying culture. We will go all the way from the scale of the individual through groups and organisations to the state scale, and then on to bigger groupings and to the global scale (Fig. 4.1).

SCALE OF HUMAN ORGANISATION

↑	Global	Global cultures Civilisations, regions	(e.g. Security, critical studies) (e.g. IR, security, general, critical)
	State	Strategic culture, ways of war, operational code etc. Political culture, national character	(e.g. security studies) (e.g. political science)
	Individual	Organisational culture Individual cognition	(e.g. management studies) (e.g. cross-cultural cognition)

Figure 4.1 Siloed examinations of culture at the different scales.

- 4.7. My definition of culture is broad and derives from the definitions discussed in the numerous disciplines described below. I define culture as:
- *Culture is the ideas, customs, and social behaviour of a human group and reflects 'how things are done around here.'*
- 4.8. To anticipate key messages from this chapter:
- 4.9. *First, the disciplines all face common challenges and they often use common ideas.* I discuss a number of these in the next subsection, such as the idea that subcultures matter.
- 4.10. *Second, a cognitive dimension is seen remarkably consistently across the different approaches to culture.* Cognition provides cultural 'throughways' that channel (but do not determine) how organisations and societies operate. This does not reduce everything to cognition – the cognitive dimension of cultures at all the scales is just one dimension, albeit an important one. Cognition is also a useful foundation as cross-cultural cognition can be tested empirically again and again.
- 4.11. *Third, it is hard to show that culture matters at many scales of human organisation—such as the state scale—due to the small number of cases.* Attempting to use past behaviour to show strategic culture helps predict the Chinese state's strategic behaviour in a 2020 is tough, not least because China hasn't fought since 1979 and a lot has happened since then. Thus, we can use consilience between multiple sources of evidence, where grounding in cognition helps. Such support for differences in strategic thought reflects the principle of consilience—where the accordance of two or more inductions from independent sources of evidence converge to strong conclusions—on which much of the natural sciences rest (Wilson, 1999).
- 4.12. *Fourth, cultures at the global scale requires further research.* New AI and digital technologies provide a useful way forward never before possible without the billions of users on current platforms, whose data can now be analysed. Chapter 8 describes these methods in more detail.
- 4.13. *Fifth, culture is just another lens.* Culture is **asserted** to matter profoundly by many of those studying it in each of the disciplines – but instead what we see across scales and disciplines is that while culture is likely a significant factor it is not more important than other factors (e.g. political, social or economic). One mustn't ignore culture, but overstating the importance of culture can be deeply misleading.³⁷

³⁷ To take one example, nuclear weapons do not only matter because people say they matter. A hydrogen bomb let off in Manhattan will kill many people.

- 4.14. *Sixth, the history of global confrontations suggests they are moving even further from their Eurocentric origins and towards a new epoch in which a global superpower (China) will be neither European nor a European offshoot (Britain, the US and USSR) – but how much does this particular cultural difference likely matter? This is a huge practical question for Western strategic planners. The answer from across the disciplines in this report is broadly reassuring, because the cultural differences due to China being non-European are less problematic than some might anticipate.*
- 4.15. *Seventh, culture or civilisation provides cognitively salient differences such as dress or religious holidays – and for this reason it will remain a way for political actors and people to divide up the world. Largely not because of what it actually means, but because it will always form a salient point for political leverage. Sadly this will likely continue: Why do ‘they’ do that? What ‘they’ are doing seems odd and ‘they’ really seem to care about it – and that seems threatening. Mitigating this challenge matters deeply for our global future and will remain ongoing long into that future.*

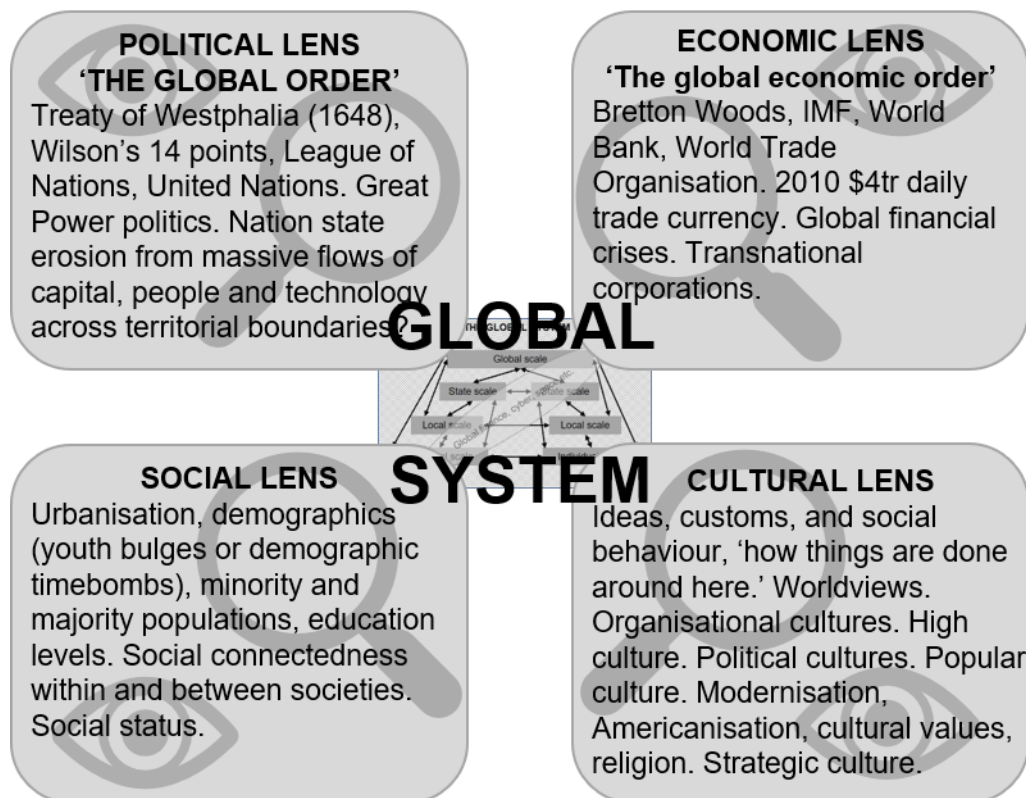


Figure 4.2 Cultural lens on the global system

CULTURE AT THE DIFFERENT SCALES OF HUMAN LIFE- AND SOME COMMONLY MADE POINTS

- 4.16. To minimise repetition below, I describe some important generic points about culture raised across many of the literatures.
- 4.17. Every discipline contains long debates how hard culture is to measure or define in a water-tight way. To give an example from one standard management studies textbook 'Although most of us will understand in our own minds what is meant by

organisational culture, it is a general concept which is difficult to define or explain precisely.’ (Mullins, 1999, 802)

- 4.18. Despite heated definitional debates, those who work on culture often clearly believe it really, really, really matters. When it comes to states’ strategic cultures, for instance, even whilst the scholar Alastair Iain Johnston was engaged in fierce definitional debates he wrote that ‘We agree that strategic cultures—which admittedly we do define very differently—are none the less critical explanations for the way different groups of people think and act when it comes to the use of force.’ (Johnston, 1999). Similarly, his chief combatant in those debates, scholar Colin Gray, wrote ‘Culture is of the utmost importance.’ (Gray, 2007). As described below, practitioners from Henry Kissinger to authoritative Chinese military publications highlight culture. After the Cold War ended, Samuel Huntington’s ‘Clash of Civilizations’ was one of the most talked about books foreign affairs, whilst US domestic politics became embroiled in ‘culture wars’ (Lewis, 2018)
- 4.19. To be sure, other scholars in many disciplines believe culture matters little, if at all—as reactions to my frequent talks about culture to cognitive scientists attest. Many cognitive scientists believe humanity is basically the same so that, for instance, studying American undergraduates tells us what we need to know about humans more broadly. Similarly, some in security studies argue culture doesn’t add that much (Desch, 1998), and many enjoy a nice, rational mathematical model without culture.
- 4.20. Most disciplines are at pains to stress that cultures are not monolithic. Subcultures matter. Within countries as large as Italy regional differences may exist – let alone countries with over a billion inhabitants such as China or India. Where do we draw the boundaries of regions? Is Russia European or Asian, or both, or neither? What is the role of socio-economic status, age or the host of other factors that add layers and complications to any views of a ‘culture’?
- 4.21. All disciplines also discuss the tension between how cultures both change and also seem to possess more durable features. We can study Han dynasty China at the time of Julius Caesar, Ming dynasty China at the time of England’s Queen Elizabeth I, Chairman Mao’s China or China right now. What has changed and what is durable? China’s population only became more urban than rural around 2011, and one might expect that to bring profound changes along with a host of other social and economic changes from industrialisation. And what about digitisation now?
- 4.22. Many disciplines debate how definitions and measurements of culture relate to both thoughts and behaviours. Cross-cultural cognitive science, for instance, discusses the importance of implicit and explicit measures (Kitayama et al., 2009). In security studies the scholar Mary Kaldor, for instance, writes: ‘the practice of security cannot be disentangled from ideas about security. The term culture thus embraces both a set of specific ideas about who or what is to be protected –the objective of security – and a set of related and relevant practices (organisation, funding, equipment, tactics, infrastructure) that shape ideas and are shaped by them.’
- 4.23. Finally, I must state in the strongest terms that, as many disciplines describe, we must distinguish the examination of cross-cultural commonalities and differences from racism. Much older work in many disciplines clearly contains racist themes—as does some work and commentary now—and avoiding racism is imperative.

- 4.24. In sum, the study of culture in all disciplines seems both slippery and important. So, what can we say? I examine culture at eight scales of human organisation, starting with the mind and brain.

INDIVIDUAL SCALE: CROSS-CULTURAL COGNITION

- 4.25. Do individuals from different cultures see the world differently? Does what seems inherently plausible or common-sensical really differ between cultures? Cross-cultural cognition has been examined by various disciplines, which Part II of this report extensively reviews. These include behavioural economics (detailed in Chapter 6), neuroscience (discussed in Chapters 5-8), and more traditional psychology (detailed in Chapter 7). Here I give a brief description and focus on more traditional cross-cultural psychology.
- 4.26. The extent of cross-cultural psychology work is indicated by some very highly cited papers, for example with over 22,800 citations³⁸ and numerous textbooks e.g. (Berry et al., 2011; Bond, 2010; Chiao et al., 2015; Heine, 2015; Kitayama and Cohen, 2007). But as Part II details, whilst some specific findings are robust and do have important policy implications, those robust findings are surprisingly few.

What is culture in cross-cultural psychology?

- 4.27. Psychology explains individuals' psychological functioning using a range of concepts such as mental processes, emotions, cognition or identity. Cross-cultural psychology is a subfield that examines the similarities and differences in such individuals' psychological functioning across various cultural groups. Some illustrative definitions of cross-cultural psychology include:
- 'cross-cultural psychology can be briefly described as the study of the relationships between cultural context and human behavior. The latter includes both overt behavior (observable actions and responses) and covert behavior (thoughts, beliefs, meanings).' (Berry et al., 2011)³⁹
 - 'Cross-cultural psychology is the empirical study of members of various culture groups who have had different experiences that lead to predictable and significant differences in behavior. In the majority of such studies, the groups under study speak different languages and are governed by different political units' (Brislin et al., 1973, 5).
 - Cultural psychology 'has a distinctive subject matter (psychological diversity, rather than psychological uniformity); it aims to reassess the uniformitarian principle of psychic unity and develop a credible theory of psychological pluralism' (Shweder, 2007, 827).
- 4.28. Within cross-cultural psychology the concept of 'culture' has often built on thinking in anthropology. Anthropologists like Clifford Geertz have been influential, and indeed Geertz himself used a cognitive or subjective description of culture. He wrote for

³⁸ (Markus and Kitayama, 1991) had 22,816 citations on Google scholar, September 2019.

³⁹ Those authors also give a longer definition of cross-cultural psychology: 'Cross-cultural psychology is the study: of similarities and differences in individual psychological functioning in various cultural and ethnocultural groups; of ongoing changes in variables reflecting such functioning; and of the relationships of psychological variables with sociocultural, ecological and biological variables.' I also draw here on their good, accessible discussions of these concepts.

instance of ‘culture in the mind of the people’ (Geertz, 1973), as a ‘historically transmitted pattern of meanings embodied in symbols’ (Geertz, 1973, 89), and as ‘a conceptual structure or system of ideas’ (Geertz, 1984, 128). In addition to that more ‘internal’ mental dimension to culture, cross-cultural psychology also agrees with some anthropologists who argue that culture also involves elements outside an individual’s mind (Fig. 4.3).

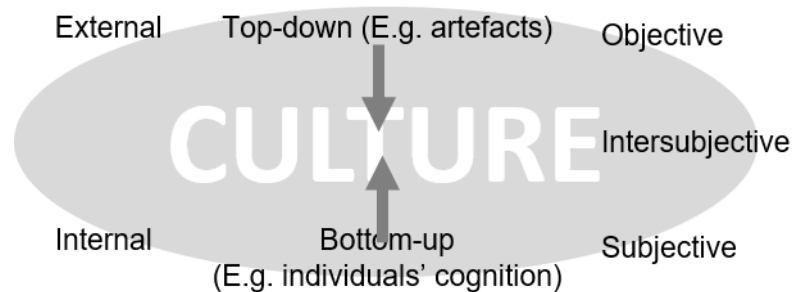


Figure 4.3 Culture internal and external to the individual’s mind.⁴⁰

- 4.29. Definitions of culture in cross-cultural psychology reflect this *combination* of elements both internal and external to the individual’s mind. Definitions of culture include:
- ‘the shared way of life of a group of people’. Also, ‘culture is a set of shared meanings and symbols ... that are constantly being created and re-created during the course of social relationships.’ (Berry et al., 2011, 4, 228)
 - ‘networks of knowledge, consisting of learned routines of thinking, feeling, and interacting with other people, as well as a corpus of substantive assertions and ideas about aspects of the world’ Hong (2009, 4) (see also Barth, 2002).
 - ‘To the cross-cultural psychologist, cultures are seen as products of past human behaviour and as shapers of future human behavior. Thus, humans are producers of culture and, at the same time, our behavior is influenced by it. We have produced social environments that continually serve to bring about continuities and changes in lifestyles over time and uniformities and diversities in lifestyles over space. How human beings modify culture and how our cultures modify us is what cross-cultural psychology is all about.’ (Segall et al., 1999, 23)
- 4.30. Put another way, such thinking recognises that culture arises from interactions between *scales of human organisation*, e.g. the individual and the social networks of which they form part.

Does culture matter for cognition and, if so, in what specific ways?

- 4.31. In Part II of this report I conduct an extensive series of systematic reviews to address this question. Importantly I conduct reviews across whole bodies of studies because cognitive science—like many other fields such as cell biology—suffers from the ‘replication crisis’ in which only about half of studies can be replicated even in ideal

⁴⁰ ‘Subjective’ relates to conscious beliefs; ‘objective’ relates to phenomena independent of human beliefs; and ‘intersubjective’ phenomena arise from the networks of shared communication between individuals during social interactions.

lab conditions (see Chapter 5). I compare East Asia and the West, not only because potential confrontations involving cultures from these regions matters profoundly for the future of global strategy (see Chapters 2 and 3), but also because these are the most studied cross-cultural cognitive comparisons and so provide the best case for finding replicable results if they exist.

- 4.32. What did I find – does culture matter? If one just accepted many highly cited studies and ignored the problems of replication, then one would for instance believe clear differences existed when comparing Western and East Asian populations in risk-taking or responses to fairness in behavioural economics. However, not only are many cross-cultural differences not replicated, but even where cross-cultural differences are replicated the basic patterns of behaviour are still seen across cultures (e.g. people tend to reject unfairness). That said, I found some *specific* aspects of choice that do differ.
- 4.33. To pre-empt the results from Part II, key findings are:
- (1) For most aspects of choice, no robust evidence shows cultural differences (e.g. risk or fairness);
 - (2) Some differences are often discussed but lack any clear testing (e.g. East Asians care more about “face”); and
 - (3) Some aspects of choice do consistently differ, e.g. East Asians tend to engage in more *context-dependent* processing than Westerners, by attending more to a salient object’s relationship with its context. Part III examines impacts of this on Chinese and US strategic thinking.

Global policy implications of cross-cultural cognition

- 4.34. (1) To conduct successful influence operations on populations relies on understanding how target audiences perceive the world and make decisions. *Think ‘outside-in’ and put yourself in the shoes of the audience.* Cognitive factors are critical, for practical applications see e.g. Wright (2019)⁴¹.
- Cross-cultural cognitive *commonalities* mean we can be more confident when transferring cognitive interventions between cultures.
 - Cross-cultural cognitive differences can be harnessed, as discussed in Part II.
- 4.35. (2) Deterrence, offense and defence at the state scale have key cognitive dimensions in both Western and Chinese strategic thinking (e.g. in capstone US and Chinese doctrine⁴²).
- For many aspects of decision-making (e.g. risk, fairness or loss aversion) we can be more confident these don’t differ markedly between cultures.

BETWEEN INDIVIDUAL AND STATE SCALES: (I) ORGANISATIONAL CULTURE IN MANAGEMENT STUDIES

- 4.36. The term ‘organisational culture’ is now commonplace in management studies. It appears in the titles or abstracts of over 4,000 academic papers (Gillespie and Reader, 2017). One standard textbook nicely sums up the literature:

⁴¹ Download from www.intelligentbiology.co.uk.

⁴² See Part III.

- *‘Although most of us will understand in our own minds what is meant by organisational culture, it is a general concept which is difficult to define or explain precisely. ... Although people may not be aware consciously of culture, it still has a pervasive influence over their behaviour and actions. There is, however, no consensus on its meaning which applications to the analysis of work organisations.’ (Mullins, 1999, 802–3)*

What is ‘organisational culture’?

- 4.37. A classic short definition is ‘the way we do things around here.’(Bower, 1966, 22) Andrew Pettigrew introduced the concept of organizational culture to the field in 1979 (Pettigrew, 1979), and described culture as an amalgam of beliefs, identity, ritual, and myth—a conceptualization still widely used today. Later work elaborated such broad definitions, for instance with Johnson’s ‘cultural web’ bringing together the various strands shown in Fig. 4.4a (Johnson, 1992, 31). However, ‘organisational culture’ is hard to define, with one recent count finding over 40 academic definitions.
- 4.38. A prominent theme in concepts of organisational culture is the idea that culture arises from interactions between people and their environment – that is, from factors both internal and external to individuals. This *cognitive dimension* maps on to similar ideas from cross-cultural cognition (Fig. 4.3). Schein’s influential work, for instance, describes three components to culture: (a) a shared and explicit framework of values and beliefs by which employees make sense of and undertake their work; (b) internalised and non-conscious assumptions (e.g. regarding authority) that shape how people think, feel, and act; and (c) the systems, procedures, and histories that provide context for individuals’ work (Schein, 1984).

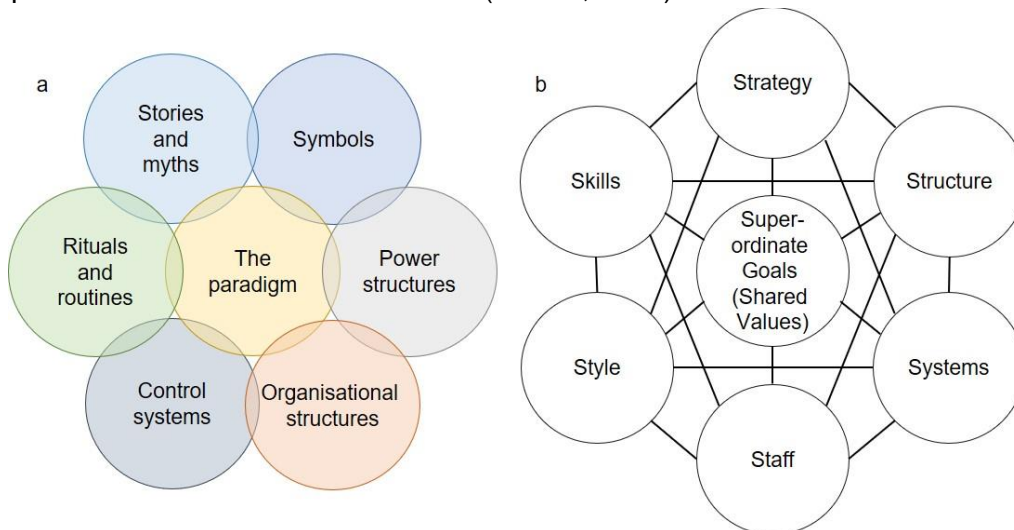


Figure 4.4 (a) The ‘cultural web’ of an organization (Johnson, 1992, 31). (b) The McKinsey ‘7S’ model has been a very well-known model for understanding organisations for over four decades – and I include it here to illustrate how cultural aspects like ‘Shared Values’ are central to much thinking about management. Does organisational culture matter and, if so, in what specific ways?

- 4.39. Scholars who write about organisational culture clearly think it matters, and indeed it seems near universally accepted that all organisations have a distinctive culture that

shapes how people behave within them (Watkins, 2013) - but on what evidence (not just nice theory or a few cases) does this actually rest? As one recent overview noted *'although much research has been dedicated to exploring the link between culture and organisational performance, little empirical evidence exists to discretely link the two. Instead, the bulk of publications offer theoretical insights on the relationship between culture and performance.'* (Glynn et al., 2018)

- 4.40. Other recent reviews report correlations between certain features of organisational culture and various organizational performance outcomes (e.g. Hartnell et al., 2011; Sackmann, 2011). However, as Sackmann (2011) wrote in her review of 55 empirical studies from 2000-2009, 'the measurement of organisational culture and performance is still diverse and problematic' Moreover, even if one accepts such correlations, a further challenge is to go from correlation to causation in which longitudinal studies are important. Sackmann (2011) identified six longitudinal studies among the 55 total studies published between 2000-2009. A subsequent longitudinal study augmented these by using further controls whilst analysing data from 95 franchise automobile dealerships over six years (Boyce et al., 2015). This study suggested culture 'comes first,' consistently predicting subsequent ratings of customer satisfaction and vehicle sales.
- 4.41. **Which aspects of an organisational culture influence performance?** The review by Sackman (2011, 217) reported that the relationship culture and performance is contingent on internal and external context. She described how companies with some cultural orientations derived a positive benefit (being open-, outside-, customer-, people-, mission-, quality-orientated), whilst being hierarchical and bureaucratic had a negative effect. She also described how external factors such as industry, economic system and nation may play a role.
- 4.42. Another recent summary (Gillespie and Reader, 2017) suggested three important aspects of culture that affected performance
- First, the 'people orientation' of an organisation, whereby it supports employees through placing emphasis on training and growth opportunities, rewarding and publicly recognising work, and supporting employees when they have difficulties.
 - Second, ethical orientation. This relates to the moral position of an organisation, and the extent to which there is a culture to ignore the 'right' route in order to gain short-term advantage.
 - Third, market orientation. This refers to a culture 'that (1) places the highest priority on the profitability creation and maintenance of superior customer value while considering the interests of other key stakeholders; and (2) provides norms of behaviour regarding the organizational development of and responsiveness to market information.' (Slater and Narver, 1995)
- 4.43. **How might organisational culture differ between countries?** Shortly after Pettigrew (1979) introduced the concept of organisational culture, Geert Hofstede (1980), published his book *'Culture's Consequences'* describing his research that examined IBM employees in some 40 countries. He questioned the applicability of American management theory abroad and studied cultural differences that interface with and influence organizational cultural characteristics. Since then numerous books and articles have been published (Gehrke and Claes, 2014; Steers et al., 2013; Thomas, 2018), although how robust the findings are is unclear.

Global policy implications of organisational culture

- 4.44. (1) For US national security organisations themselves:
- Successful adaptation—to new technology, politics, economics and to adopt a global mindset—will likely involve ensuring an adaptive organisational culture.
 - For those parts of US government organisations seeking to deter, compel or influence others, *adopting an audience-centred organisational culture* will likely help people in the organisation successfully put themselves in audiences' shoes.
- 4.45. (2) For US policymakers seeking to understand competitors or other states:
- Evaluating others' organisational cultures is tough, under-researched (Gillespie and Reader, 2017) and requires more research.
 - *Competitors' capabilities* likely rest in part on their organisational cultures—e.g. 'jointness', adaptability to new technologies, PRC 'civil-military fusion' related to innovation—and this should be explicitly evaluated.
 - *Competitors' intentions* likely rest in part on their organisational cultures—e.g. highly offensive military doctrines shaped events before World War One, Nazi Germany's fantastical military production targets and furious spending shaped German needs for conquest⁴³—and this should be explicitly evaluated.
 - An organisation's culture is shaped by and shapes its practices, processes and structures – US policymakers should anticipate that the organisational cultures police and domestic security services of swing states in global competition may be very slow to change (e.g. Central Asian states who inherited the Soviet KGB's legacies).

BETWEEN INDIVIDUAL AND STATE SCALES: (II) GROUPS AND COMMUNITIES IN ANTHROPOLOGY AND SOCIOLOGY

- 4.46. Anthropology and sociology provide further ways to examine groups, communities or societies. Key thinkers in these fields may be interested in cognition, such as anthropologist Clifford Geertz discussed above, but their focus of interest is at scales above that of the individual. They are interested in society. A society can be described as a collection of people who occupy the same area, who engage in regular patterns of social interaction (i.e. some kind of social structure) and their social relationships involve a sense of connectedness at least in the sense of mutual awareness and some cooperation (e.g. warring tribes don't constitute a society).
- 4.47. What is the difference between anthropology and sociology? Both are products of the nineteenth century, and while traditionally sociology typically studied 'modern' societies instead anthropology studied small-scale or pre-industrial societies. Anthropology is now also concerned with 'modern' Western societies, and so now perhaps the main difference between the fields is anthropology's comparative outlook and concern with cultural difference.

⁴³ Regarding the 'Cult of Offensive' before World War One see e.g. multiple chapters in Rosecrance and Miller (2015), such as Stephen Van Evera's. For German plans and spending before World War Two see Chapter 2 in this report. More broadly it has been argued that the organisational cultures of arm forces affect military doctrine (Kier, 1999). Military organisations' cultures may differ between states as this chapter describes, and they may also show commonalities, e.g. a tendency to advocate offensive doctrines that may increase government funding and prestige, and military officials may hold belief far more conservative and cautious beliefs than non-military officials (Scobell, 2003).

- 4.48. Anthropologists have perhaps been more influential shaping other disciplines' thinking discussed in this chapter, such as 'organisational culture' or 'cross-cultural psychology' discussed above or 'strategic culture' discussed below. I thus focus on anthropology here.

What is culture in anthropology?

- 4.49. Thinking about 'culture' in anthropology has undergone various changes since the field began, and describing these trends is perhaps the best way to discuss concepts of culture in anthropology.
- 4.50. Tylor first used the term 'culture' in an anthropological work (Tylor, 1871). He defined culture as *'that complex whole which includes knowledge, belief, art, morals, laws, customs and any other capabilities and habits acquired by man as a member of society.'*
- 4.51. (Kroeber and Kluckhohn, 1952) conducted an influential survey many definitions of culture from across the field upto that point. They grouped them into six major classes and provided their own definition:
- *'Culture consists of patterns, explicit and implicit, of and for behavior acquired and transmitted by symbols, constituting the distinctive achievements of human groups, including their embodiments in artifacts; the essential core of culture consists of traditional (i.e., historically derived and selected) ideas and especially their attached values; cultural systems may on the one hand be considered as products of action, on the other as conditioning elements of further action.'*
- 4.52. Amongst these conceptual currents, considering culture as a more objective context for the development of humans was a more influential perspective until the 1970s, at which point a greater focus on more subjective components took hold. Clifford Geertz's work provides an example of this enhanced focus on including more subjective dimensions of culture, for instance describing *'culture in the mind of the people'* (Geertz, 1973). However, this should not be taken too far, as Geertz himself (1973, 12) warned against the 'cognitive fallacy' that 'culture consists of mental phenomena.' It's top down and bottom up, as Figure 4.3 shows.
- 4.53. Debates continued between those suggesting a greater focus on either more objective dimensions of culture or more subjective dimensions of culture – until over time more balanced perspectives emerged with some influential anthropologists accepting the objective, subjective and intersubjective meanings of the concept. For instance, *'[c]ulture . . . consists of regular occurrences in the humanly created world, in the schemas people share as a result of these, and in the interactions between these schemas and this world'*. (Strauss and Quinn, 1997, 7); and culture is *'the entire social heritage of a group, including material culture and external structures, learned actions, and mental representations of many kinds.'* (D'Andrade, 1995, 212).
- 4.54. Finally we come to the most recent epoch, in which postmodernist challenges ask: can we ever know anything at all, and does anything go? Postmodernist challenges (e.g. Abu-Lughod, 1991) take aim at essentially all positivist and empirical science, not just anthropology. Arguments advanced against the usefulness of the concept of 'culture' include, for instance, that it is too static and so cannot deal with obvious global changes; that it ignores individual agency in the construction of daily cultural

interactions; and that it categorises phenomena that actually show continuous variations. Postmodern critiques certainly provide a useful corrective to overly simplistic ideas of 'culture', and certainly from some philosophical perspectives one can consider everything as relative and one can never really know anything—much of that was articulated thousands of years ago in ancient Greece—but beyond being a useful corrective, postmodernist approaches add little of interest.

Does culture in anthropology matter and, if so, in what specific ways?

- 4.55. Anthropologists collected vast amounts of data on cultures over many decades. Anthropological studies typically use qualitative methods called 'ethnography' to understand a culture. These produce a 'thick' description involving detailed accounts of experiences, compared to the 'thin' descriptions of, for instance, a typical cognitive experiment.
- 4.56. This huge body of work describes cultures that differ markedly, and thus culture clearly matters in the sense that cultural diversity contributes to the rich tapestry of humanity's existence. This sense in which culture matters must not be minimised.
- 4.57. But on a more practical level, **do the cultures described by anthropologists affect the decision-making of target audiences in ways practically useful for policy?** Such policy may aim to better understand the behaviour of particular social groups in order to design a public health intervention, for instance targeting smoking cessation, safe sex or uptake of anti-malarial bednets. Such policy might aim to better understand how the views held by communities in Afghanistan, which shape their decisions related to growing poppy or radicalisation. I suggest two distinct ways to view this question.
- 4.58. *First, conducting new qualitative research using anthropological methods can be very helpful to answer "how" or "why" questions about an audience.* Such 'qualitative' social research does not rely on comparing quantities, and is really helpful for instance where quantitative surveys of populations do not permit detailed analysis of tastes or emotions – or to identify unknown unknowns. Methods include focus groups, ethnographies (direct observation of the activity of members of a particular social group), interviews or case studies. These methods are also useful for comparisons of small numbers of cases, such as specific violent extremist groups. There is a challenge of generalisability—how far one case can explain other cases—and of reproducibility, and thus rigour is needed to avoid mere storytelling (King et al., 1994).
- 4.59. Qualitative methods can also often be combined in a complementary way with quantitative methods (i.e. comparing numbers) to yield stronger conclusions than either type of method could produce alone. A good example involves the real-world study of an intervention to promote reconciliation in Rwanda (Paluck, 2009). That study used the qualitative method of focus groups, as well as the quantitative method of surveys to measure perceptions, and measured behaviour.
- 4.60. *Second, looking over the vast amount of past anthropological data can help answer questions about the culture of social groups now.* At a minimum this can provide useful background information. However, using this vast wealth of data faces two problems. One challenge is the relevance of data collected many decades ago when applied now. Another challenge is how to organise such data to answer specific

questions? To address this, some fieldwork is now organised in searchable databases, of which the best known is the Human Relations Area Files (HRAF) ⁴⁴ database, located at Yale University with some 500 member institutions worldwide. This has enabled organisation into broader topics and categories that can help guide thinking (see e.g. Table 4.1).

Global policy implications from anthropology

- 4.61. (1) *Don't be so ethnocentric!* Others' worldviews can differ from our own—as anthropology, sociology and history show—and policymakers should try to put themselves in the audience's shoes.
- 4.62. (2) Qualitative methods can be crucial to understand target audiences, particularly to answer 'why' or 'how' questions. Try to combine qualitative and quantitative methods where possible. Chapter 11 in Wright 2019 '*From Control to Influence*' provides practical approaches.⁴⁵
- 4.63. (3) Artificial Intelligence and big data promise a powerful new route to assay cultures in 'thicker' ways than quantitative methods traditionally allow – see Chapter 8 this volume.
- 4.64. (4) A wealth of background reading emerges from anthropology's huge back catalogue for analysts with time, and need, to get a feel for a culture – even if it provides few precise and simply applicable lessons.

General Characteristics	Food and Clothing	Housing and Technology	Economy and Transport
Methodology	Food Quest	Exploitative Activities	Property
Geography	Food Processing	Processing of Basic Materials	Exchange
Human Biology	Food Consumption	Building and Construction	Marketing
Behavior Processes and Personality	Drink, Drugs and Indulgence	Structures	Finance
Demography	Clothing	Settlements	Labor
History and Culture	Adornment	Energy and Power	Business and Industrial
Change		Machines	Organization
Language			Travel and Transportation
Communication			
Individual and Family Activities	Community and Government	Welfare, Religion and Science	Sex and the Life Cycle
Living Standards and Routines	Community	Social Problems	Sex
Recreation	Territorial Organization	Health and Welfare	Reproduction
Fine Arts	State	Sickness	Infancy and Childhood
Entertainment	Government Activities	Death	Socialization
Social Stratification	Political and Sanctions	Religious Beliefs	Education

⁴⁴ <https://hraf.yale.edu/>

⁴⁵ Download from www.intelligentbiology.co.uk. My report contains other useful references, e.g. (Paul et al., 2015)

Interpersonal Relations	Law	Ecclesiastical Organization	Adolescence, Adulthood, Old Age
Marriage	Offenses and Sanctions	Numbers and Measures	
Family	Justice	Ideas About Nature and Man	
Kinship	War		

Table 4.1 Human Relations Area Files (HRAF). See (Barry, 1980)

STATE SCALE: THE STATE AND ITS TWO FACES

4.65. A state is a political association that possesses a monopoly on legitimate coercion and exercises that power over a defined territory.⁴⁶ The Montevideo Convention on the Rights and Duties of the State (1933), Article 1, describes four features: (1) a defined territory; (2) a permanent population; (3) an effective government; and (4) the capacity to enter into relations with other states.

4.66. A state is a system-of-systems, in which various systems relate to healthcare, education, internal security, the criminal justice system, the diplomatic service, the military and so on. A state may be usefully examined through the political, cultural, economic and social lenses – and all four lenses are significant.

- Grey zone confrontations show how all four lenses matter. A central concern has been that attacks on a state exploit ‘seams’ between diplomatic, economic or military aspects of power – and this should be countered via ‘joined up government or ‘whole of government’ approaches.’

4.67. Looking through the cultural lens at this ‘system-of-systems’, one can see how each subsystem’s culture will be influenced by the multiple overlapping relationships it has within that state and beyond it. The culture of a state’s military, for instance, may reflect aspects of the broader political culture (e.g. in a citizen army), the culture of internal security (e.g. how

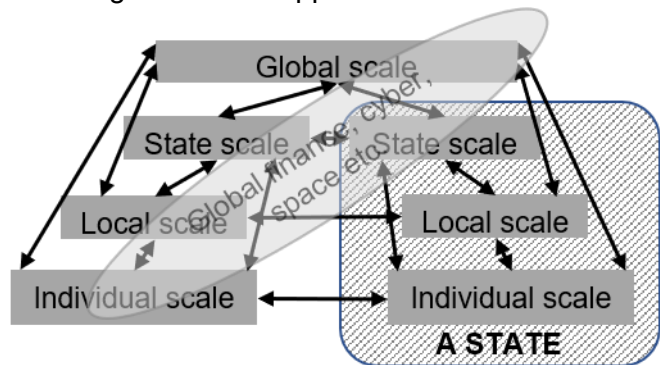


Figure 4.5 A state is itself a system-of-systems within the global system.

Russia conducts information operations abroad relates to how it influences domestic Russian audiences), strong organisational cultures (e.g. the US Marine Corps), allies (e.g. the UK, Japanese and South Korean militaries are intimately linked to the US) and broader ideas about the role of the military in domestic and foreign affairs.

4.68. This profusion of systems can seem overwhelming, and one useful way to get to grips with them is to consider them according to the domestic and the external (Fig.

⁴⁶ For discussions see e.g. (Fukuyama, 2014, 9, 23). As he describes, a state is a hierarchical, centralized organization. A modern state is impersonal, where a citizen’s relationship to the ruler does not depend on personal ties, but simply one’s status as citizen, and recruitment to administrative positions is based on impersonal criteria such as merit, education or technical knowledge.

4.6). A state's domestic and external faces are both critical to understand global competition and I examine each in turn over the next two sections.



Figure 4.6 The two-faced state: domestic and external cultures in a state – and the competitive spectrum

STATE SCALE: (I) A STATE'S DOMESTIC FACE – 'POLITICAL CULTURES' AND DOMESTIC SECURITY CULTURES

4.69. Cultural aspects of a state's domestic face have been examined from diverse perspectives. In this section I first look at the cultural aspects of domestic politics, and then at cultural aspects related to domestic security.

Culture and domestic politics

- 4.70. Political culture is the composite of basic values, feelings, and knowledge that underlie the political process within a political association such as a state, and it relates to political processes in general—and their legitimacy—rather than specific actors like a particular Prime Minister. This is a deliberately broad definition and I discuss two perspectives.
- 4.71. **First, Western political science has considered political culture** explicitly since pathbreaking work by Almond and Verba (1963).⁴⁷ They defined political culture as the 'particular distribution of patterns of orientation toward political objects' within a society (Almond and Verba, 1963, 13). They set out to identify the political culture that best upheld democratic politics. They identified three general types of political culture—a participant political culture, a subject political culture, and a parochial political culture—and argue that a 'civic culture' blends these to reconcile the participation of citizens in the political process with a vital necessity for government to govern. Amongst criticisms of their theory is that it rests on the unproven assumption that political attitudes and values shape behaviour, and not the other way round.
- 4.72. More recent scholarship tends to use the term political culture in a broader way than Almond and Verba. In one such broader definition 'political culture can be conceptualized as the matrix of meanings embodied in expressive symbols,

⁴⁷ A longer history, however, also includes work such as that by Charles Secondat, Baron de Montesquieu (1689-1755). Best known for his work on separation of powers, he published a great work on 'The spirit of the laws.'

practices, and beliefs that constitute ordinary politics in a bounded collectivity and regulated by institutions.’ (Berezin and Sandusky, 2017). However, whilst the field is always ‘promising’ it is not clear that more recent work gets around the generic challenges of defining and measuring ‘culture’ discussed above (Berezin, 1997; Davis, 1989; Harrison and Huntington, 2001; Steinmetz, 1999).

- 4.73. The *cognitive dimensions* of political culture are also prominent in this work, for instance including perceptions of the legitimacy of the systems. As Almond and Verba write, their path-breaking work built on those ‘who have been concerned with the relations between the psychological and political characteristics of nations. In particular, this study has been greatly influenced by the “culture-personality” or “psycho-cultural” approach.’ (Almond and Verba, 1963, 13) To give another example, Lucian Pye, the American political scientist, considered political culture as the composite of basic values, feelings, and knowledge that underlie the political process – and thus political culture’s building blocks are the citizens’ beliefs, opinions, and emotions toward their form of government.
- 4.74. **Secondly, ‘social capital’ and trust** have been argued to account for significant political, social and economic differences between states. For scholar Robert Putnam social capital reflected the social and cultural factors that underpin wealth creation (Putnam, 2001). Putnam, for instance, attributes differences between north and south Italy to such differences, with a culture of distrust being particularly problematic in southern Italy (Putnam, 1993; Putnam et al., 1994)
- 4.75. Political scientist Francis Fukuyama (2014, 206-7) discusses how cultural factors may help explain the greater state capacity in Germany, Britain, and America on the one hand compared to Greece and Italy on the other. Fukuyama describes how:
- In Germany, Britain and America a high degree of moralism often accompanies movements that push for social change, with individual leaders of reform movements being motivated by personal religiosity. For Prussia this included the Great Elector and Frederick William I, who were Calvinist. Calvinism infused the highly successful early Dutch state, and puritanism was an important driver of reform in England from before the English Civil War and later in America. Fukuyama describes how ‘putting loyalty to the state ahead of loyalty to family, region or tribe requires a broad radius of trust and social capital.’ As well as these forms of Protestantism, the sources of social capital in Britain and the US included a strong national identity organised around institutions: in Britain comprising the common law, Parliament and monarchy; and in the US comprising the common-law and democratic institutions emanating from the Constitution. By the 19 century, government in both countries was seen as a legitimate expression of national sovereignty and object of considerable loyalty.
 - Greeks and Italians, in contrast, always had a more troubled sense of national identity. The Greek state was often perceived as a tool of foreign powers and therefore illegitimate. Italy, particularly in the south, had also been a playground of various foreign invaders and the unified country after 1861 yet together regions of very different cultures and levels of development.
- 4.76. Again, social capital and trust seem likely to matter, although the generic problems of definition and measurement are much debated.

Domestic security

- 4.77. How does a regime, and society more broadly, view the use of coercion and force domestically – in terms of ordinary policing, secret police, surveillance, paramilitaries and the domestic use of the military itself? Formal rules are one thing, but the culture of their implementation likely also matters (Bowling et al., 2019). I outline some important areas below.
- 4.78. *Surveillance*: What is considered reasonable surveillance and how is that surveillance integrated with everyday police activities? As my recent report on digital surveillance discusses, many of the digital technologies are “dual use” so that key parts of digital infrastructure, like ubiquitous smartphones with AI, are being rolled out in authoritarian, hybrid and liberal democratic regimes alike.⁴⁸ Thus, key differences between digital domestic political regimes rest in part on how the regimes embed and employ the technologies. Two of these factors are:
- *Regulatory and legal frameworks governing the digital technologies and how they are implemented.*
 - *Secret services and police services*: Domestic surveillance by security services for national security will be conducted in all regime types, for instance for counter-terrorism. Regime types may differ in multiple ways, such as: how far such surveillance extends to the broader population; if its use is highly limited to secret services or used by broader state security or police; or whether it is used for domestic political purposes by the leadership or regime.
- 4.79. *Police*: Are the police an essentially neutral body, preservers of state authority, or a tool of oppression that acts in the interests of the state or an elite? In a police state, the police force operates outside the legal framework and is unaccountable to either the courts or general public (e.g. Nazi Germany or the USSR).
- 4.80. *Military*: Views on the use of the military domestically⁴⁹ can also vary widely between countries. A military role is widespread. US troops, for instance, were used to implement federal racial desegregation orders in the 1960s. However, that role can be much more pronounced in some states. In China, for instance, under the banner of ‘Double Support’ there is a reciprocal relationship between the Chinese people and PLA – although since Tiananmen Square 4th June 1989 whilst the PLA has clearly had the potential to quell unrest it has not been actively doing so (Blasko, 2012, 211, 216–19).

Global policy implications of a state’s domestic cultures

- 4.81. (1) Competitor states’ internal characteristics are key:
- Foreign-policy decision-making is influenced by domestic cultures, e.g. how do their populations and interest groups affect decision-making? For related discussions of AI’s impacts on Chinese foreign policy decision-making see

⁴⁸ Wright (2019), *AI, China, Russia and the Global Order*, Air University Press. See www.intelligentbiology.co.uk

⁴⁹ See also Scobell (2003), who defines civil-military relations or culture as ‘the distribution of values, norms, and beliefs within a country regarding military doctrine and the identity, format, and function of the military in domestic and foreign affairs.’ and Thomas Burger’s discussion of “Political-military” culture in (Katzenstein, 1996, 325–6).

Chapters 14-17 of my recent book Wright (2019) *'AI, China, Russia and Global Order.'*⁵⁰

- Competitors' domestic security cultures can shape how they campaign abroad, e.g. Russian information operations abroad use techniques honed domestically.
- 4.82. (2) Swing states are a key battleground in the global competition for influence, just as they were in previous grey zone conflicts like the Cold War, and better understanding their domestic political and organisational characteristics is key.
- We should develop comparative political culture measures that describe quantities useful for policy.
 - Buttressing political cultures in swing states should be a focus of effort, e.g. building trust and social capital.
- 4.83. (3) Within our own societies we should buttress positive aspects of political culture (e.g. trust and social capital) and our domestic security services.

STATE SCALE: (II) A STATE'S SECOND FACE: EXTERNALLY FACING COMPETITIVE CULTURES

- 4.84. A state also faces outwards, and there it cooperates and competes along the competitive spectrum from peace to war. Multiple parts of a state play roles in external relations, including foreign ministries, militaries or trade bodies. Here I focus on two bodies of work⁵¹, which also together nicely cover activities along the competitive spectrum.
- Firstly, I discuss *cultural concepts of external order*—for instance involving diplomacy or trade—that matter all along the competitive spectrum although predominate at its more peaceful end. Part III of this report discusses culture in relation to Chinese and US 'soft power' and other concepts in more detail.
 - Second, I *strategic culture* that focusses more the use or threat of force. Again this matters all along the competitive spectrum, for instance in deterrence, but predominates as one moves along towards war. Part III examines Chinese and US strategic culture—and its cognitive foundations—in more detail.

⁵⁰ Wright (2019), *AI, China, Russia and the Global Order*, Air University Press. See www.intelligentbiology.co.uk

⁵¹ Two other important bodies of work that complement these analyses are not included due to space limitations. (1) 'Operational code' analyses relate to elite decision-making and worldviews. It includes a core cognitive component. Key work includes (George, 1969) (2) 'Ways of war' relates to how countries think about war, academically sits more in historical than political science studies and it predates political science studies of 'strategic culture'.



Figure 4.7 A state's externally-facing competitive cultures— and the competitive spectrum

Culture and concepts of external relations

- 4.85. A state's strategic community—including the Ministry of foreign affairs, diplomats, broader analytical community, senior decision-makers and so on—must have some basic views of how states interact, of other states' motivations and decision-making, and how the global order (the global system's political face) operates. This does not minimise the importance of multiple strands of thought amongst a state's strategic community. Chinese thinking, for instance, is far from monolithic (Shambaugh, 2013, Ch. 2). However, prominent scholars and practitioners assert that culture does matter and that it differs between cultures with different classical traditions, such as China, the West, India or the Islamic world (e.g. Kissinger, 2015). So, do such broad differences exist?
- 4.86. Certainly, different ideas exist. An example often contrasted against a Western 'Westphalian' system is the Chinese concept of 'tianxia'. The tianxia system can be defined as 'a Sino-centric hierarchical relationship among unequals, governed according to Confucian principles of benevolence. As traditionally practiced, it incorporated an important role for the observance of ritual, including the presentation of tribute to the emperor as Son of Heaven, purportedly resulting in a *Pax Sinica*.' (Dreyer, 2015). How much such ideas affect behaviour is unclear and debated (Dreyer, 2015; Ford, 2015).
- 4.87. In addition to the existence of different ideas, academics or policy entrepreneurs often reach back to classics. In the West we cannot help ourselves from reaching back to ancient Greek or Roman classics – just consider the branding of 'Thucydides Trap' by leading Harvard scholar Graham Allison. Another prominent international relations scholar wrote a 762 page recent book based on ancient Greek ideas of human motivation (Lebow, 2008). In China we see similar reaching back. There is an attempt to produce a '*Chinese IR theory*' (Yaqing, 2012). Prof Yan Xuetong of Tsinghua University elaborated a theory that has been called 'moral realism' (Liu et al., 2010; Ng, 2010). Yan's book '*Ancient Chinese Thought, Modern Chinese Power*' explicitly reaches back to ancient Chinese thinking for inspiration (Yan, 2013) – in a book Henry Kissinger described as 'A fascinating study'. Such views are also

articulated with respect to hierarchy and Japanese or Korean thinking (Park, 2017). But again how much this matter now is unclear.

- 4.88. Despite these observations, though, predominant Chinese strategic concepts might be better described as a flavour of realism. Scholar David Shambaugh (2013) describes many schools of thought in Chinese thinking, but that more realist ideas dominate. Scholars Andrew Nathan and Andrew Scobell write that offensive realism from the West is the most influential body of IR theory in China (Nathan and Scobell, 2012, 92).
- 4.89. Indeed, whilst culture might matter for these reasons above, for the usual generic reasons it is harder to measure or define cultural influences in particular on behaviour. This is perhaps best illustrated by the huge efforts given to such a task by Harvard China scholar Alastair Iain Johnston in his book 'Cultural Realism' (discussed below under strategic culture) and *Social States* (Johnston, 2007). 'Social States' tries to show how cultural influences from international interactions from 1980-2000 (e.g. with ASEAN or Comprehensive Nuclear Test Ban Treaty) changed Chinese foreign policy behaviour in a way not explained by 'hard power' explanations. He relies on cognitive foundations. However, a lack of Chinese documentation of decision-making the evidence is necessarily circumstantial and open to debate.
- 4.90. One might therefore broaden this question out and ask – does culture matter at all? Here there exists much better evidence. Hedley Bull, for instance, in 1977 argued that ideas, norms and so on did matter in his classic book (Bull, 2012). This foundational text of the 'English School' argues that anarchy is itself a society, constructed by its constituents, with its own rules and norms of behaviour.
- 4.91. At the end of Cold War a huge new field of academic international relations then arose based on culture: constructivism. Constructivism emphasizes the meanings assigned to material objects, rather than the existence of the objects themselves. It has been highly influential in theoretical international relations debates. Even those who argue against constructivism say 'There is no question that virtually all cultural theories tell us something about how states behave.' (Desch, 1998, 141). Key works include those by Alexander Wendt and in edited volumes (Katzenstein, 1996). However, whilst ideas matter, so do material factors like geography or economics (Snyder, 2009).

Strategic culture

- 4.92. Further along the competitive spectrum, although overlapping, is 'strategic culture.' The term emerged at the same time as 'organisational culture' in the late 1970s (Sondhaus, 2006, 1) since when an extensive IR literature on culture's role in national security decision-making also developed. This began with Ken Booth's (Booth, 1979) and Jack Snyder's seminal works. Snyder's coined the term 'strategic culture', which he defined as 'the sum total of ideas, conditioned emotional responses, and patterns of habitual behaviour that members of a national strategic community have acquired through instruction or imitation.' (Snyder, 1977). Other definitions

- 'A nation's traditions, values, attitudes, patterns of behavior, habits, symbols, achievements and particular ways of adapting to the environment and solving problems with respect to the threat or use of force' (Booth 1990, 121).
- 'An integrated system of symbols (e.g. argumentation structures, languages, analogies, metaphors) which acts to establish pervasive and long-lasting strategic preferences by formulating concepts of the role and efficacy of military force in interstate political affairs, and by clothing these conceptions with such an aura of factuality that the strategic preferences seem uniquely realistic and efficacious' (Johnston 1995, 46)
- 'The persistent socially transmitted ideas, attitudes, traditions, habits of mind, and preferred methods that are more or less specific to a particular geographically based security community that has had a unique Historical experience' (Gray 1999a: 131). 'Ideals... the evidence of *ideas*, and... behavior' (Gray 1999a: 132). 'It is within us; we, our institutions, and our behavior, are in the context' (Gray 1999a: 133).

4.93. Does strategic culture matter? However, despite much valuable scholarship, heated debates raged about culture, most notably about a key question: can one separate culture and behaviour, and so falsifiably test potential effects of culture as an *independent variable* on behaviour as a *dependent variable*? This debate followed Johnston's mid-1990s work that argued most earlier work on strategic culture had defined it too broadly to be falsifiable, and so he sought to omit behaviour from the independent variable. (Johnston, 1995) In the ensuing debate, Colin Gray in particular pushed back, for example arguing that culture and behaviour cannot be detached because culture, by definition, includes both. (Gray, 1999) By the new millennium this key debate had reached stalemate, as illustrated by later scholars who acknowledged Johnston's contribution but noted, for example, that 'culture does not act independently'⁵² and that 'Clear, irrefutable proof of a causal link ... is probably impossible.'⁵³ So, how to advance this stalemate and provide empirical evidence that culture matters?

4.94. Part III of this report shows how cognitive dimensions help break this stalemate. Psychology figured in a number of key contributions, where basic psychological explanations were applied to illuminate elite decisions. These did not draw on cross-cultural psychology. For example, Booth's discussion of the concept of culture describes 'cultural thoughtways' and how 'those fighting units called nation-states are identifiable socio-psychologically, as well as politically.'⁵⁴ Writing before much modern cross-cultural psychology, Booth noted that while 'It is probably true that we still do not know enough about national character to know whether it exists or not. [He assumes] one can reasonably talk about probabilities and tendencies [and that] 'certain qualities of intellect and character occur more frequently and are more highly valued in one nation than another'.⁵⁵ In another example, Alastair Iain Johnston's seminal work on Chinese strategic culture appeals in part to psychological

⁵² Forrest E. Morgan, *Compellence and the Strategic Culture of Imperial Japan* (Westport, Conn: Praeger, 2003). pp. 8-9

⁵³ (Scobell, 2003) p. 38

⁵⁴ (Booth, 1979) p. 14. See also e.g. pp. 101, 130, 146-7.

⁵⁵ (Booth, 1979) p. 16

explanation⁵⁶ and his later book expanding on the topic was explicitly based on social psychological microprocesses. (Johnston, 2007)

- 4.95. Clearly factors other than cognitive help explain differences in strategic thinking between polities. Firstly, when considering the strategic thinking of a polity such as China's, as described in the introduction numerous influential U.S. and Chinese voices assert the enduring importance of classic cultural texts in shaping modern Chinese strategic thinking.⁵⁷ Prominent Western classic texts include Thucydides and Clausewitz whose works have greatly influenced strategic thinking, and key scholarship examining them.⁵⁸ A second alternative explanation is that strategic thinking varies in response to balance of power considerations. For example, when considering military doctrine concerning offense, defense and deterrence—as this Part III does below—scholar Barry Posen argues that differences reflect different responses to the security threats thrown up by the lawless environment outside the state's borders.⁵⁹ Posen's characterisation of 'balance of power theory' that includes a 'focus on how these general constraints and incentives [above] combine with the unique situations of individual states to lead them to specific foreign or military policies.'

Global policy implications of the state's externally-facing cultures

- 4.96. Conclusively proving externally-facing cultural differences matter is very hard—and we should try to use convergent evidence, e.g. cognitive, to help us as described in Part III of this report—but it is likely one influence amongst several (e.g. material factors also matter).
- Policymakers should employ usable frameworks and questions, as in Part III of this report that describes a context-dependence/independence framework.
- 4.97. The current system for global politics originated in largely Western ideas and will increasingly come under attack:
- Perceived legitimacy is central to the acceptance of global orders, and now plenty of reasons exist to challenge to a Western system, not least that many countries like China had little or no say in its creation.
 - Alternative ideas can always be found, because we humans can always dig back into cultural 'classics' for ideas as Western and Chinese thinkers do – and because new technologies like AI enable plausible new paths forward that disrupt existing global politics (see e.g. Wright 2019 AI, China, Russia and Global Order).
 - The Western system is itself continually developing—see Chapter 2—and neither is the 'Westphalian system' very clear itself. This is not least because Western ideas of supranational 'governance' and the human rights enable Western powers to actively and routinely penetrate aspects of other states.

⁵⁶ (Johnston, 1995) E.g. pp. 156-7, 164, 174.

⁵⁷ E.g. (Kissinger, 2011) (Ford, 2010)

⁵⁸ E.g. (Lebow, 2007) (Kagan and Viggiano, 2013)

⁵⁹ (Posen, 1984) pp. 34-5, 68-9, 69-74 and 78-9.

BETWEEN STATE AND GLOBAL SCALES: GLOBAL REGIONS, GROUPINGS AND 'CLASHES OF CIVILISATIONS'

- 4.98. The scale between the state and the global is likely to grow in importance. Continuing globalisation is one driver, where regional or other groupings appear to be building blocks in globalisation and where global competition increasingly requires huge size to compete. Post-1945 Britain was just too small to compete as an equal in a world with the US and Soviet Union, just as Russia is now too small in the emerging competition between China and the US. So what are the groupings at this scale, and how do they relate to culture? Two main types emerge.
- 4.99. *Firstly, groupings may form and these groupings may develop cultural commonalities.* Potential examples include NATO, the Cold War Communist Bloc, or the current global group of liberal democracies (e.g. the US, many European countries and Japan). As the systems-of-systems that comprise states work together in something like NATO they form networks and linkages. In order to function, these human and organisational networks develop cultures that describe 'how things are done around here.' Such networks are often the subject of writers on globalisation (Slaughter, 2009), but these networks also form in groupings like NATO or the EU.⁶⁰All regularly interacting networks of humans develop culture – and now we are developing networks on increasingly global scales as well as more local and national.
- 4.100. *Secondly, cultural factors common across states may cause groupings to form.* This idea is part of Samuel Huntington's famous 'Clash of Civilisations', in which he additionally anticipated conflict between these larger cultural groups. Huntington wrote (Huntington, 1993, 22–4):
- *'It is my hypothesis that the fundamental source of conflict in this new world will not be primarily ideological or primarily economic. The great divisions among humankind and the dominating source conflict will be cultural. ... A civilization is a cultural entity. ... 'A civilization is thus the highest cultural grouping of people and the broadest level of cultural identity people have short of that which distinguishes humans from other species. It is defined both by common objective elements, such as language, history, religion, customs, institutions, and by the subjective self-identification of people.'* Cognitive factors were key to his idea of what civilisations are, and also why conflict will arise, for instance because *'increasing interactions intensify civilization consciousness and awareness of differences between civilizations and commonalities within civilization'*.

Does culture matter at this scale and, if so, in what specific ways?

- 4.101. We can say that cultures in the contemporary world seem clustered, in the sense that cultural groupings in the world seem to exist and do so at a scale above the state. To give three sources of evidence from the contemporary world:

⁶⁰ The EU, for instance, has developed links at the elite level, even if more mass or popular culture is still largely nationally based (Judt, 2005). The collapse of the Soviet Union and Communist Bloc and replacement of 'Communist Man' with Russians, Ukrainians, Poles, or Kazakhs shows the weakness of some seemingly powerful groupings – but equally the organisational cultures in Central Asian security states that draw on shared KGB heritage illustrates that we must consider many types of cultures as this report advocates.

- Cross-cultural psychology has focussed heavily on East Asian and Western cultural groupings. Some scholars argue for enduring psychological differences between these two contexts, with highly influential work by Richard Nisbett arguing that ‘there are very dramatic social-psychological differences between East-Asians as a group and people of European culture as a group’ (2003, 76). Other highly influential scholarly work argues for two distinct definitions of the ‘self’ (Markus and Kitayama, 1991). In Part II of this report I examine these claims in detail and show that whilst they are overstated, some robust cross-cultural differences do exist between these groupings – and in Part III then show how these relate to strategic thinking.
- Global questionnaire surveys show some consistent differences between various cultural groupings in the world, such as between Confucian and English-speaking countries. One example is the ‘World Values Survey.’⁶¹
- In ‘high culture’ there appear to be different touchpoints, for instance when comparing classic philosophical works. Scholars in Europe or European offshoots such as the US often refer back to Plato or Aristotle, for instance, whilst Chinese scholars might more often seek insights in their philosophical classics by Confucius, Mozi and others (e.g. (Yan, 2013)).

4.102. History also provides evidence for cultural commonalities above the scale of states that impact on strategy. Germanic states fought each other for many centuries and fissured along religious grounds, but nineteenth century German—and indeed Italian unification—related to cultural, or at least linguistic, boundaries. In both the German and Italian cases unification was pushed by something real from below, in addition to external forces (e.g. France’s defeat of Austria was critical for Italian unification), warfare and the actions of a state that forged the Union – Piedmont in the case of Italy, Prussia in the case of Germany.

4.103. However, powerful evidence also suggests that these cultural groupings are just one driver of events amongst many, and often far from the most important. Whilst many countries of a European cultural grouping are coming together in the EU, for many reasons there is no prospect of their being joined soon by the European offshoots the United States or Russia (which is at least partly European). Even within Europe Norway and Switzerland are outside the EU and the UK is attempting to leave. Despite great cultural similarity exists big splits can occur. During the Cold War, France pursued long-standing and active anti-American policies, for instance withdrawing from NATO (Westad, 2017). The British Empire before World War One did not manage to unify Britain with the Dominions that were clearly very culturally similar – often depicted as the British lion and Dominion lion cubs. Many parts of the United States bridle at Washington’s rule, so would they be ruled by Brussels? Would France be ruled by Washington?

4.104. Non-cultural factors are also drive groupings above the state scale. The twentieth century ‘liberal’ grouping of states led by the US clearly did not form only along cultural lines. It was partly determined by where each sides’ where armies ended up in 1945. The US occupied Japan, whilst Korea and Vietnam were split north and south, and Europe was split East and West.⁶² It is unclear that Japan and South

⁶¹ www.worldvaluessurvey.org

⁶² During the Cold War people shouldn’t have ignored cultural factors—for instance East Germany was challenged by the presence of a culturally very similar West Germany that was much richer.

Korea⁶³ would now gravitate towards China rather than the US just because they are all East Asian cultures.

- 4.105. Moreover, even if one agrees that 'culture' might provide the key groupings and faultlines in global politics, then what cultural groupings would provide the faultlines? If it is political culture, then perhaps US, Western Europe and Japan would be natural fits. If it is the relative influence of classical texts or language then Japan should be outside the 'West'. Indeed, China, Japan, Korea and Vietnam might be considered together as a grouping with considerable Confucian influences – but that clearly cannot explain East Asian politics. Huntington squared that circle by, perhaps too conveniently, classifying Japan as a separate civilisation.
- 4.106. Evidence can also be brought to bear on the idea that civilizational faultlines will be the site of conflict. Whether analyses of historical cases using Huntington's faultlines bear his predictions has been disputed. Some studies show civilization membership was associated with neither interstate war between 1816 and 1992 (Henderson and Tucker, 2001), nor militarized interstate disputes between countries from 1950-92 (Russett et al., 2000). Huntington argued against such work (Huntington, 2000) and others suggested that civilizational faultlines predict intensity of conflict (Tuscisny, 2004). In short, it's messy.
- 4.107. Indeed, at this scale of human social organisation the generic problems of studying culture become even harder as we go from 193 states to a much smaller number of groupings whose boundaries and existence are highly disputed – and even then such cultural groupings are only factor driving events..

Global policy implications of the scale between the state and the global

- 4.108. Regional or 'civilizational' differences are likely to matter less for how individuals or states make decisions than other types of difference.
- North and South Korea, for instance, differ in profound ways despite only separating some 75 years ago – and for them, the economic, political and social factors, as well as organisational and political cultures will matter much more.
 - Global factors and global models are increasingly important, as was seen in the Cold War and is occurring now as the US and China present different models for using AI-related technologies (see Wright 2019, *AI, China, Russia and Global Order*).
- 4.109. But regional or 'civilizational' boundaries will likely play a role:
- They form salient boundaries, for instance between major religions, that can be harnessed politically.
 - Aspects of political and economic development appear to be at least partly regionally correlated, often due to shared histories. Some argue, for instance, that different modern outcomes between regions derive in part because sub-Saharan Africa had a much weaker pre-colonial set of institutional, political and economic structures than East Asia (Fukuyama, 2014).

⁶³ Samuel Huntington splits Japan off from the rest of East Asia as a separate civilisation, which whilst it removes a significant problem for his thesis does not rest on very strong foundations.

GLOBAL SCALE CULTURES

- 4.110. Globalisation has proceeded apace for five hundred years changing the political, economic and social faces of the global system – and also changed global cultures. Networks have grown on a global scale—ideological, religious, trading, imperial, scientific, medical—and these global networks of humans and human organisations inevitably develop cultures. The cultural side of all these global scale networks is necessary for them to function, so that people know ‘how things are done around here’. Anne Marie Slaughter, for instance, discusses globalisation as the disaggregation of states and reaggregation around a set of functional global networks (Slaughter, 2009). The humans and organisations in those networks will combine aspects of global culture they develop as part of global networks, alongside the local or national cultures of which they also form a part.
- 4.111. We can anticipate increased convergence of global cultures, not least driven by digital technologies. In places like China, the US, Europe or Japan, for instance, smartphones are now with most of us humans from the moment we wake up until the moment we go to sleep. Such technologies shape the patterns of our lives and how we interact with others. now globalised – even the differences between Chinese and US dominated smartphone ecosystems, whilst important, are largely variations on a theme.
- 4.112. But cultural globalisation simultaneously sparks both convergence *and* divergence. Whilst the Europeanisation, Americanisation and globalisation of cultures have all proceeded apace, past centuries also consistently witnessed the reaction against these cultural forces. People, politicians and others also stress why their local, regional or national scale culture is distinctive and important. Globalisation of culture produces a backlash that occurs in very different forms, from Catalanian independence movements to Chinese attempts to develop a ‘Chinese Dream’ set specifically against the ‘American Dream’ (see Chapter 12 this volume).

Does global scale culture matter and, if so, in what specific ways?

- 4.113. Can we know whether the growth of these global cultures matters – asking the same question asked for scales discussed before? Obviously, evidence is much different, we have one globe whilst for cognitive experiments we can test thousands of participants on many different types of tasks to increase our confidence in our findings’ robustness (see Part II). But the weight of evidence—such as the spread of jeans, Coca-Cola, parliamentary democracy, Marxism, the soccer world cup, global jihadism—suggests globalisation of culture is occurring.⁶⁴
- 4.114. To ask the question of what specific ways this culture matters I turn to the example of ‘global security cultures’ elaborated by scholar Mary Kaldor.⁶⁵ Whilst I do not agree with all the ideas, they help capture multiple aspects of global scale culture useful for US policymakers.
- 4.115. **Global security cultures:** Scholar Mary Kaldor attempts to look at security and culture at the global level (Kaldor, 2016, 2018). She defines a security culture as ‘a style or a pattern of doing security that brings together a range of interlinked

⁶⁴ For accessible discussions see e.g. (Held, 2008; Osterhammel et al., 2005; Steger, 2017)

⁶⁵ Other potential topics include ‘global jihad’, or cosmopolitanism.

components (narratives, rules, tools, practices, etc.) and that are embedded in a specific set of power relations. Her characterisation shares the same basic components of culture described for all the other scales above – a fundamental cognitive dimension; the recognition that culture is embedded in legal, economic and political frameworks; and that such cultures are simultaneously global and local.

4.116. For Kaldor, three aspects of the concept of security cultures are critical:

- 'First, a security culture is based on functional rather than spatial security communities; that is to say, in so far as those who participate in a security culture can be described as a community, it is one that is characterised by groups of shared ideas and practices, a common style of doing security, a degree of mutual interdependence although not necessarily a common security policy.' Kaldor also writes 'It has similarities with notions of social psychological notions of 'cognitive schema' 'packages of both ideas and behavioural patterns inextricably linked together and co-constituting each other'
- Secondly 'I agree with Colin Gray [see 'strategic culture' above] that the practice of security cannot be disentangled from ideas about security. The term culture thus embraces both a set of specific ideas about who or what is to be protected –the objective of security – and a set of related and relevant practices (organisation, funding, equipment, tactics, infrastructure) that shape ideas and are shaped by them. "
- Thirdly, 'it is not a static concept. It is constructed. It has to be continually reproduced and diffused'.

4.117. Looking at the world today, Kaldor describes four stylised types of culture that all overlap and compete (Table 4.2). These are:

- 'Geo-politics': A legacy of the cold war. The dominant narrative is about great power contestation and the dominant tools are deployment and use of regular military forces, economic sanctions and state-to state diplomacy.
- 'New Wars': This culture evolved from the civil wars of the Cold War period. It is about the capture of power and resources, in particular state-type power, for identity based groups. The means are networks of state and non-state actors that are both global and local (militias, warlords, criminal groups),
- 'Liberal Peace': This culture is associated with the dramatic increase in multilateral interventions since the end of the Cold War. The difference between the Liberal Peace-culture and the previous two cultures is the preoccupation with stability as opposed to (the defeat of) enemies. Ideas include 'Responsibility to Protect', humanitarian intervention and the emergence of what could be described as global governance – a layering of political authority and a shift from 'ruling' to 'steering'.
- 'War on Terror': This culture focuses on the defeat of enemies but, unlike the geo-political model, the enemies are non-state actors. 9/11 plays a foundational role. It involves a shift from military means to intelligence agencies, private contractors and widespread surveillance technologies

4.118. Kaldor's ideas are, I think, a useful illustration as they encompass key trends (e.g. the blurring of inside and outside the state) and do not seek to do away with key actors (e.g. the state) whose demise is overhyped. How we manage such global

scale cultures—not only cultures at more familiar scales like the state—forms a key part of global strategy for the foreseeable future.

	<i>Political Authority</i>	<i>Inside/Outside of the state</i>	<i>Public/private</i>
Geo-Politics	Nation-state	Clear distinction between inside and outside	Security under public control
New Wars	Fragmented and Decentralised	Merging of outside with inside – war and violence moving inside	Merging of public and private
Liberal Peace	Global Governance	Spread of inside to outside. More police type use of military	Use of private sub-contracting
War on Terror	US hegemony	Spread of outside to inside – more militarized policing	Merging of public and private

Table 4.2 Dimensions of global security cultures. From Kaldor (2016).

Global policy implications of global cultures

- 4.119. The US has shaped global scale cultures more than any other state across every period since 1945 including our current one.
- It has done so across the economic, political, social and cultural faces of the global system.
 - During the Cold War it did this whilst one of two superpowers—and thus even if China achieves superpower status we can anticipate this will continue for some time at least.
 - During the post-Cold War period it did this by routinely penetrating other states, for instance to further some Human Rights or the Right to Protect and then the Global War on Terror.
 - As the only superpower the US has unique ability through its practices and example to shape global scale security cultures.

POLICY RECOMMENDATIONS

- 4.120. I describe key messages at the beginning of this chapter, and at the end of each subsection. These findings may be applied to better conduct deterrence or other influence operations, for instance by enabling analysts to put themselves in the shoes of audiences (e.g. cross-cultural cognition or strategic culture). They may also help conduct grey zone confrontations by better understanding audiences, and through anticipating how states will develop over time by better understanding their political and domestic security cultures. I apply such ideas to AI in my recent book (Wright, 2019, *AI, China Russia and the Global Order*) and in the subsequent parts of this report.

PART II CULTURE IN THE INDIVIDUAL'S MIND AND BRAIN

In Part II of this report, I systematically reviewed thousands of cognitive science papers comparing decision-making in East Asia and the West.

I found: (1) for most aspects of choice no robust evidence shows cultural differences (e.g. risk or fairness); (2) some differences are often discussed but lack any clear testing (e.g. East Asians care more about “face”); and (3) some aspects of choice do consistently differ, e.g. East Asians tend to engage in more *context-dependent* processing than Westerners, by attending more to a salient object's relationship with its context.

Chapter 5 provides a background. Chapter 6 systematically examines behavioural economics tasks. Chapter 7 examines more traditional cross-cultural psychology. Chapter 8 examines computational approaches with links to big data and AI.

Chapter 5 Robust evidence about cross-cultural cognition

5.1. In this chapter I provide a background for Part II, and discuss four areas.

- A framework for understanding audience decision-making is crucial for successful influence. But cross-cultural cognitive research questions the applicability of that framework between cultures.
- Thus, Part II of this report asks: *What key aspects of human decision-making are robustly common and different in laboratory experiments directly comparing individuals from the West and East Asia?*
- Answering this question requires ensuring the cross-cultural research is robust enough, particularly in light of the “replication crisis” in which many high profile experiments cannot be replicated even within cultures. *Thus, we need systematic reviews of multiple studies and convergent evidence.*
- Moreover, because human decision-making is multifaceted, no isolated discipline can capture its principal components – and thus I take three cuts at this challenge: behavioural economics, more traditional cross-cultural psychology and computational approaches.

INTRODUCTION

5.2. Understanding how humans decide between options on the basis of perceived rewards and punishments, risks or social motivations is a central aim of the political, economic, social, cognitive and neurobiological sciences (Glimcher and Fehr, 2013). Understanding such value-based decision-making is critical for policy, such as:

- anticipating target audiences' behaviour and generating behavioural change across many policy areas from health to international development (World Bank, 2015) and in information operations;
- Radicalisation - why do individuals decide to commit acts of violence and atrocities; what psychological and emotional dynamics and socialization

processes drive radicalization; how might one deter individuals from such choices?

- Chinese and US deterrence both include fundamental cognitive dimensions (see e.g. my recent chapter in Knopf and Harrington (2019)).

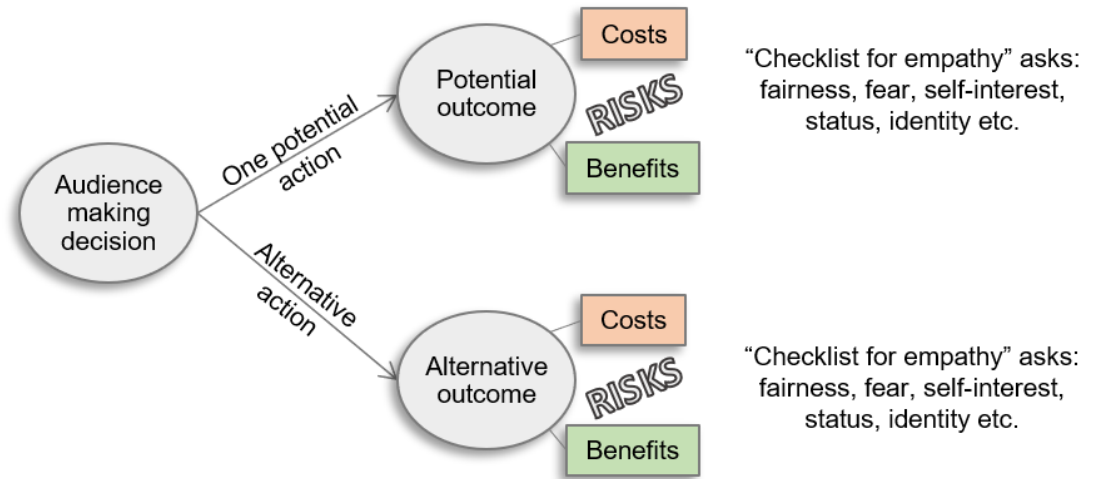


Figure.5.1 An audience’s decision calculus. Do risks, losses, regret or fairness act differently on the decision calculus in different cultures. How might the context in which decisions are made affect them – and might this differ between cultures?

5.3. A basic framework to understand human choice (e.g. Fig. 5.1) forms a crucial foundation for such policy. We have gained a lot of experimental and other empirical evidence over the past decades.

- One key source of evidence has been lab experiments in ‘behavioural economics’, which is a psychologically-informed economics focussing on either key modulators of non-social choice (e.g. risk in financial risk-taking tasks), or of social choice (e.g. social motivations like fairness in social tasks like the “Ultimatum Game”) (Camerer, 2003).
- Another has been neuroscience, which has made dramatic advances in understanding the computational processes in the brain by which humans make decisions about rewards and punishments. These computational approaches provide unified explanations of diverse behavioural phenomena (Behrens et al., 2009; Dayan, 2008; Dolan and Dayan, 2013; Glimcher and Fehr, 2013; Rangel et al., 2008).

5.4. But can such a framework simply be transferred across cultures?

5.5. Culture’s profound effects on how humans perceive, understand and act in the world are suggested by extensive work – in particular, high-profile laboratory studies and theory comparing individuals from East Asian and Western populations (Nisbett, 2003)⁶⁶. The great bulk of psychology research is based on a highly unrepresentative sample of the world’s population who are WEIRD (Western, Educated, Industrialised,

⁶⁶ It is important to state, however, that I do not believe culture is monolithic, either within countries as large as France or China, let alone within regions such as “East Asia”. Furthermore, my cognitive perspective is not reductionist and complements others, such as from anthropology. As a prominent cross-cultural psychology textbook describes: “the recently emerged field of cultural psychology has been strongly concerned with testing findings from traditional western social psychology in other countries, mostly East Asian (e.g., China, Japan, Korea).” (Berry et al., 2011, 84)

Rich and Democratic) (Henrich et al., 2010). Indeed, much psychology research arises from the U.S. that comprises only 5% of the world's population, and even then it usually involves undergraduates. To understand decision-making in our globalising world, we must understand how culture may affect core aspects of the emerging framework explaining human individual choice. Thus, in Part II of this report I ask:

- *What key aspects of human decision-making are robustly common and different in laboratory experiments directly comparing individuals from the West and East Asia?*

5.6. Answering this question extends existing literature. Nine recent reviews of cross-cultural behaviour and neuroscience contained little or nothing on value-based choice (Ambady and Bharucha, 2009; Ames and Fiske, 2010; Han, 2015; Han et al., 2013; Han and Northoff, 2008, 2009; Kitayama and Uskul, 2011; Lehman et al., 2004; Rule et al., 2013). Another recent review focussed on culture and decision-making, but did not aim to examine the body of literature within each aspect of decision-making (Yates and de Oliveira, 2016). Older papers have examined specific tasks, such as the Public Goods Game (Zelmer, 2003), Ultimatum Game (Oosterbeek et al., 2004) and Trust Game (Johnson and Mislin, 2011). However, not only has much been published since the earlier reviews, here we also focus on only two regions and also only on studies that tested the same experiment in both populations to directly compare them. Importantly, such direct comparisons help match design and procedures between cultures to assess replicability.

THE REPLICATION CRISIS AND CONVERGENT EVIDENCE

- 5.7. Robust is a crucial word here because before using cross cultural findings for policy—or as a foundation for research—we must be sure enough of their truth.⁶⁷ Indeed, as the “replication crisis” in psychology shows, around half of experiments even in well controlled laboratory settings within cultures cannot be replicated (Collaboration, 2015) – a challenge also facing many other scientific fields, such as cancer biology (Begley and Ellis, 2012).
- 5.8. Some high-profile studies directly comparing East Asian versus Western individuals' choices have been highly cited⁶⁸, for example in the Ultimatum Game (Roth et al., 1991) cited 1461 times, or in risk tasks (Weber and Hsee, 1998) cited 741 times and (Hsee and Weber, 1999) cited 449 times. But have they been replicated? Thus, here we focus on replication in bodies of work examining key findings.
- 5.9. To be sure, replication is not the only way to show robustness. Convergent evidence from different methods also plays an important role. This relates to the concept of “consilience” in which one can be more confident of a particular explanation if it is supported by multiple, independent sources of evidence (Wilson, 1999). Thus, here I focus on both replication and on convergent evidence between methods.

A MULTI-FACETED APPROACH: THREE CUTS

- 5.10. Human decision-making is multifaceted and capturing its principal components requires a breadth unlikely to be found in one discipline alone. No one discipline has

⁶⁷ To be sure, that a phenomenon is replicable and robust in the laboratory does not mean it is useful for policy, but it's an important start.

⁶⁸ Google scholar on 28 Nov 2016.

a monopoly of insights, as each has its own preoccupations, emphases and lenses for what facets of choice to investigate and how investigate them. This is the case even when limiting the focus to laboratory experiments, which I do here because they have been a particular focus of replication efforts in psychology, and also to make our task more manageable.⁶⁹

- 5.11. Thus, here I take three cuts at this challenge, each of which originates in a distinctive disciplinary perspective, and I conduct three complementary reviews.

A first cut: Behavioural economics (Chapter 6)

- 5.12. Behavioural economics is an extension of the Rational Choice Theory (RCT) that has aimed over the past three decades to “increase the explanatory power of economics by providing it with more realistic psychological foundations” (Camerer and Loewenstein, 2004). Behavioural economics, for example, extended Expected Utility Theory with Prospect Theory (Kahneman and Tversky, 1979), and Game Theory with Behavioural Game Theory (Camerer, 2003).

- 5.13. Here I focus on nine aspects of choice central to behavioural economics and extensively studied experimentally in the West. For each, I systematically review lab experiments directly comparing individuals from the West and East Asia. For non-social choice I examined four areas:

- (1) risk (how individuals make decisions under uncertainty is fundamental to RCT and behavioural economic theories such as Prospect Theory);
- (2) intertemporal choice (again how potential delays affect the value of outcomes is central to RCT and behavioural economics);
- (3) whether outcomes reflect gains or losses (most famously applied in Prospect Theory);
- (4) regret (counterfactuals have long interested behavioural economists).

- 5.14. I examine five social tasks⁷⁰:

- (5) Ultimatum Game (examining fairness);
- (6) Dictator Game (again assaying fairness or altruism);
- (7) Trust Game (examining how individuals trust others and how trust is repaid);
- (8) Prisoners’ Dilemma Game (that assays the trade-off between cooperation and self-interest)
- (9) Public Goods Game (that further assays cooperation and self-interest).

A second cut: More traditional cross-cultural psychology (Chapter 7)

- 5.15. Whilst behavioural economics extends rational choice models, psychology rests upon a more diverse range of concepts—such as mental processes, emotions, cognition, identity and so on—in order to explain individuals’ psychological functioning. Cross-cultural psychology is a subfield that examines the similarities and differences in such

⁶⁹ Moreover, examining studies that directly compare between cultures helps identify important null results – if statistical comparisons are made between cultures and no difference is consistently shown over repeated studies, this more likely reflects a true null result. Identifying robust commonalities, as well as differences, matters profoundly to interpret scientific knowledge between Western and East Asian populations.

⁷⁰ Colin Camerer’s (2003) seminal behavioural game theory book describes how influential these tasks are.

individuals' psychological functioning in various cultural groups.⁷¹ This cross-cultural psychology complements behavioural economics approaches. Whilst behavioural economics paradigms typically arose from concerns such as whether or why individuals cooperate or care about fairness at all; cross-cultural psychology focusses more on potential cross-cultural hypotheses suggested by broader academic psychology, literature, philosophy or broader cultural concerns.

- 5.16. Here I examine four contentions of particular potential relevance to value-based decision-making and policy, and I reviewed empirical evidence for each that directly compares individuals from the West and East Asia in lab experiments.
- 5.17. Two of the contentions have been the focus of much high-profile empirical and theoretical work in cross-cultural psychology.
- (1) The idea that westerners tend to engage in more context-independent cognitive processes by focusing on a salient object independently of its context, whereas East Asians tend to engage in more context-dependent or holistic cognitive processes by attending to the relationship between the object and the context in which it is located.
 - (2) A second high-profile contention relates to the nature of how others are influenced, which suggests a greater role amongst East Asians for social influence leading to adjustment, conformity and harmony.
- 5.18. I also examined two contentions widely discussed in relation to their policy relevance.
- (3) East Asians care more about 'face.'
 - (4) East Asians have more hierarchical understanding of society and social relationships.

A third cut: cultural computations – brains, big data and artificial intelligence (Chapter 8)

- 5.19. Finally, to provide a third complementary perspective I examined cognitive neuroscience grounded in computational approaches. Neuroscience has made dramatic advances in understanding the computational processes in the brain by which humans make decisions, in particular where computational approaches provide unified explanations of diverse behavioural phenomena (Behrens et al., 2009; Dayan, 2008; Dolan and Dayan, 2013). Despite considerable work within cultures, primarily in the West, little empirical cross-cultural work has yet been conducted, and so here we focus more on the potential of the field.
- 5.20. In this third cut, I first describe two examples of how a computational framework can help understand cross-cultural decision-making: "prediction error" and "metacognition." I then discuss four broader ways a computationally-grounded approach can advance the study of cross-cultural choice.

⁷¹ For a discussion of definitions see e.g. (Berry et al., 2011) and Chapter 4 this volume.

Chapter 6 First cut: Behavioural economics laboratory studies directly comparing East Asia and the West

6.1. Key points include:

- I examine nine aspects of choice central to behavioural economics. All have been extensively studied experimentally in the West – and all relate directly to an audience’s decision calculus that is key to influence.
- For each aspect of choice, I asked what findings were robustly common and different in laboratory studies directly comparing individuals from the West and East Asia
- Of 2219 studies identified, I included 13 non-social studies (e.g. of risk or loss) and 23 social studies (e.g. the Ultimatum Game assaying fairness).
- I found that key behaviours were seen across cultures (e.g. rejecting unfair offers in the Ultimatum Game), and that for most aspects of choice (e.g. risk or loss) there was little replicable evidence for cross-cultural differences.
- A subset of tasks did show cultural differences: East Asian trustees consistently repaid more in the Trust Game, and moderately consistently East Asians contributed less in a Public Goods Game.
- ***Bottom line for policymakers: Key aspects of decision-making such as responses to risk, losses or fairness are not shown to differ consistently between East Asian and Western individuals – making us more confident to extrapolate about such commonalities between cultures.***

6.2. This chapter first provides an introduction and then a brief overview of methods (methods are full detailed in the end of chapter Annex). Next, I describe findings from four non-social aspects of choice (risk, loss, time, regret), followed by five social tasks (the Ultimatum, Trust, Dictator, Prisoners’ Dilemma and Public Goods Games). Last is a discussion.

INTRODUCTION

6.3. Behavioural economics is an extension of the Rational Choice Theory (RCT)-based accounts of decision-making (von Neumann and Morgenstern, 1944) that have dominated much of the economic and political sciences since the mid-twentieth century. RCT’s core concept is that agent’s choices are “rational” in that they are consistent. RCT models individual choices through accounts such as Expected Utility Theory, and social choices through Game Theory. To improve these models, a subfield called behavioral economics has aimed over the past three decades to “increase the explanatory power of economics by providing it with more realistic psychological foundations” (Camerer and Loewenstein, 2004). However, “it is important to emphasize that the behavioral economics approach extends rational choice and equilibrium models; it does not advocate abandoning these models entirely.” (Ho et al., 2006) Behavioural economics, for example, extended Expected

Utility Theory with Prospect Theory (Kahneman and Tversky, 1979), and Game Theory with Behavioural Game Theory (Camerer, 2003).

- 6.4. Many aspects of choice studied in behavioral economics are central to understanding the decision-making of audiences, including allies, neutral or adversaries (see Fig. 6.1)

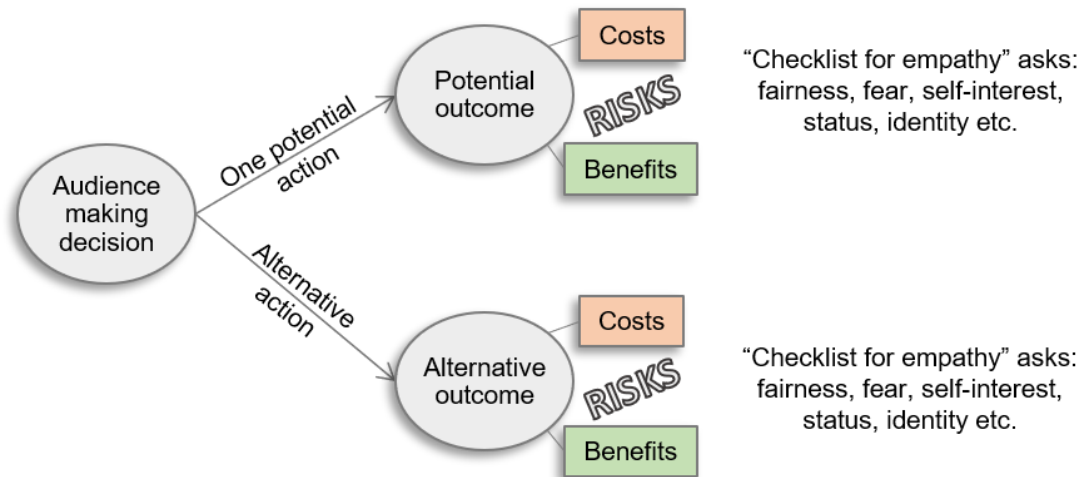


Figure 6.1 Audience decision calculus.

- 6.5. Here I focus on nine aspects of choice central to behavioural economics and extensively studied experimentally in the West. For each, I systematically review lab experiments directly comparing individuals from the West and East Asia. For non-social choice I examined four areas:

- (1) risk (how individuals make decisions under uncertainty is fundamental to RCT and behavioural economic theories such as Prospect Theory);
- (2) intertemporal choice (again how potential delays affect the value of outcomes is central to RCT and behavioural economics);
- (3) whether outcomes reflect gains or losses (most famously applied in Prospect Theory);
- (4) regret (counterfactuals have long interested behavioural economists).

- 6.6. I examine five social tasks⁷²:

- (5) Ultimatum Game (examining fairness);
- (6) Dictator Game (again assaying fairness or altruism);
- (7) Trust Game (examining how individuals trust others and how trust is repaid);
- (8) Prisoners' Dilemma Game (that assays the trade-off between cooperation and self-interest)
- (9) Public Goods Game (that further assays cooperation and self-interest).

METHODS OVERVIEW

- 6.7. My systematic search proceeded in three stages to identify primary articles (full details in end of chapter Annex).

⁷²Colin Camerer's (2003) seminal Behavioural Game Theory book describes how influential these tasks are.

- 6.8. *First stage:* This arose from our 27 separate searches, one in each of the three databases (Web of Science, PsycINFO and EconLit) for each of the nine areas. This yielded in total 2219 records, whose titles and abstracts were screened for relevance.
- 6.9. *Second stage:* I included studies if they reported direct statistical comparison of Western versus East Asian participants performing the task; were published in English; involved choosing between monetary incentives (real or hypothetical)⁷³; and included adult participants. By “Western”, we refer to countries in northwestern Europe (the United Kingdom, France, Germany, Switzerland, the Netherlands, etc.), and the mainly English-speaking societies of the United States, Canada, New Zealand, and Australia. By “East Asian”, I refer to Japan, Korea, China (the PRC, Hong Kong, Macao and Taiwan) and also to the ethnic Chinese population in Singapore and Malaysia.
- 6.10. *Third stage:* I identified further articles this process generated 36 papers included in this review (Table 6.3 lists all included non-social studies and Supplementary Tables S1 and S2 details their methods and findings. Table 6.4 lists all included social studies and Supplementary Tables S3 and S4 details their methods and findings.
- 6.11. *Neuroimaging studies:* Identified in part from the above searches and other methods.

GENERAL RESULTS

- 6.12. Only one of the thirteen non-social studies used real incentives – which is even more remarkable given the large number of social studies using real incentives (Table 6.1). The US dominated the Western countries, while the East Asian countries were more evenly spread (Table 3). Reporting of even basic demographics was surprisingly poor, and illustrates the poor overall methodological descriptions in many studies (Table 6.2).

ASPECT OF CHOICE		Number of studies	
		Real incentives	Hypothetical incentives
NON-SOCIAL DECISIONS	Risk	0	8
	Intertemporal choice	0	3
	Losses & Gains	1	1 (+5)
	Regret	0	0
	Total	1	12 (+5)
SOCIAL DECISIONS	UG	5	1
	DG	1	0
	TG	7	1
	PGG	3	0
	PDG	5	0
	Total	21	2
Grand totals		22	14 (+5)

Table 6.1: Behavioural economics: Number of studies for each aspect of decision-making. The number in brackets reflects that four of the studies of risk and one of the studies of

⁷³ For example, we did not include studies examining risk-taking in academic or health choices. We also focussed on studies involving financial choices and so, for example, did not include studies where individuals rated their perception of risk.

intertemporal choice also reported results manipulations of gains versus losses. We add this in parentheses to avoid double counting.

COUNTRIES STUDIED							
REAL INCENTIVES				HYPOTHETICAL INCENTIVES			
Western	(N)	East Asian	(N)	Western	(N)	East Asian	(N)
USA	13	Japan	14	USA	11	PRC	7
Germany	3	PRC	6	UK	2	South Korea	2
Austria	3	South Korea	5	Canada	1	Hong Kong	2
UK	1	Hong Kong ⁷⁷	1	Poland	1	Macao ⁷⁴	1
New Zealand	1	Malaysia ⁷⁸	1	Germany	1	Singapore ⁷⁵	1
Australia	1					Chinese ⁷⁶	1

DEMOGRAPHY REPORTED			
REAL INCENTIVES		HYPOTHETICAL INCENTIVES	
Total number of papers: N=22		Total number of papers: N=14	
Gender	Provided info. N=11	Gender	Provided info. N=8
Age	Provided info. N=6	Age	Provided info. N=8

Table 6.2: Behavioural economics: Summary of countries studied and demographic information provided. The top panels show the countries studied. The lower panels illustrate the lack of reporting of basic demographic information in a number of the studies.

NON-SOCIAL DECISIONS

6.13. I examined four non-social aspects of choice. Table 6.3 summarizes the studies, and Supplementary Tables S1 and S2 details the tasks and findings in each study.

Risk

- 6.14. Risk can be thought of as known uncertainty, for instance betting on the outcome of a coin toss. Risk pervades all human decision-making. Policymakers can manipulate risk, and use it as a tool for deterrence or escalation management.
- 6.15. Risk arises when there is uncertainty about which of the potential outcomes in a situation will occur. Consider US, UK and German troops currently deploying to NATO's east, such as the Baltic Republics. Their placement is unambiguous, and provides a tripwire so that there is the risk of escalation if there were serious aggression. This is a classic use of the risk of escalation.
- 6.16. In addition to classic work⁷⁹, for modern discussions and policy applications see my recent reports on Grey Zone conflict and on outer space operations.⁸⁰

⁷⁴ Macao (PRC)

⁷⁵ Singaporeans who have Chinese ethnicity.

⁷⁶ Tan & Johnson 1996 only said participants had Chinese ethnicity (from Hong Kong, PRC, Singapore and other countries).

⁷⁷ Hong Kong (PRC)

⁷⁸ Malaysia: Malaysian Chinese

⁷⁹ For a classic chapter on manipulating risk see (Schelling, 1966) Ch. 3.

⁸⁰ Wright (2019) *From Control to Influence: Cognition in the Grey Zone*; and Wright (2019) *Mindspace: Cognition in Space Operations*, pp. 25-9. Download from www.intelligentbiology.co.uk

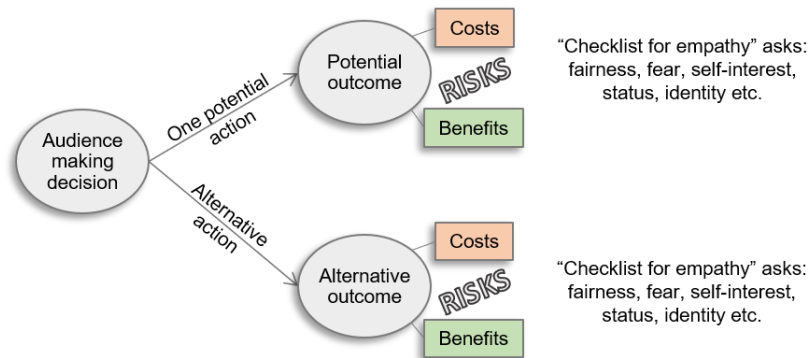


Figure.6.2 Risk in the audience decision calculus

- 6.17. *Cross-cultural findings:* Only studies using hypothetical incentives met the inclusion criteria, and these nine studies report highly inconsistent cross-cultural results. Two well-known studies reported greater risk-taking in PRC Chinese than a US sample (Hsee and Weber, 1999; Weber and Hsee, 1998), although it was unclear if Chinese were absolutely risk-seeking overall or just more risk-taking than in the US. However, while one study replicated that finding (Brumagim and Wu, 2005), one study only found greater Hong Kong Chinese than UK risk-taking with one of the two analytic measures they used (Lau and Ranyard, 2005), while three other studies found no difference in risk-taking between US and East Asians (Arkes et al., 2010; Fong and Wyer, 2003; Sinha, 1996).
- 6.18. Two of the studies report risk-taking separately with gains and losses, again with inconsistent results. One study reported the US sample was more risk-averse with losses than PRC Chinese but had similar risk-taking with gains (Wang and Fischbeck, 2008), while in contrast a previous study by those authors describe US participants as more risk-averse with gains and no difference in risk-taking with a loss decision (Wang and Fischbeck, 2004).

Intertemporal choice

- 6.19. Intertemporal choice relates to how delays affect the value of potential options, e.g. would one prefer \$10 today or \$13 in year's time?
- 6.20. *Cross-cultural findings:* Three studies examined intertemporal choice, all of which used hypothetical amounts, and with highly inconsistent cross-cultural results. One showed Chinese discounted more than US with gains but had similar discount rates with losses (Gong et al., 2014). Another showed Koreans discounted less than a US sample (Kim et al., 2012). A third showed no cultural difference in one task and an interaction of culture, time and risk in another task (Tan and Johnson, 1996).

Losses and gains

- 6.21. Whether potential outcomes involved losses and gains can affect choice. It has been most famously applied in Prospect Theory (Kahneman and Tversky, 1979; Tversky and Kahneman, 1992), although it is important to realise that Prospect Theory is just one theory of choice (and not the first) that involves different effects for gains and losses.

6.22. Good evidence exists that risk acts differently when individuals make decisions about gains versus losses. This is seen in the brain and lab behaviour (Wright et al., 2012), as well as in some aspects of influence campaigns as described in my recent report on Grey Zone conflict (Wright 2019, *From Control to Influence*, Chapters 2, 5 and Appendix 1).

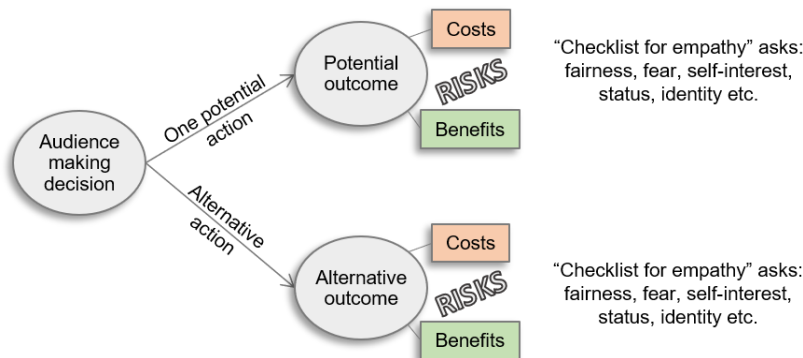


Figure 6.3 Gains and losses in the audience decision calculus.

6.23. *Cross-cultural findings:* Seven studies in total examined whether potential outcomes involved losses and gains, of which only one used real incentives, and over which results were inconsistent. The seven studies comprised five of those described above for risk, as well as one study described above that examined intertemporal choice, and one additional study. The seven studies examined four areas.

6.24. Firstly, one study used real incentives (Arkes et al., 2010) to examine dynamic “reference point adaptation”, characterized as the updating of the reference point following outcomes, e.g. shifting up after a gain and down after a loss. The reference point is the standard against which individuals regard potential outcomes as losses or gains (Kahneman and Tversky, 1979). A 2 (US, East Asia) x 2 (gain, loss) x 2 (no intervention, or a sale/repurchase intervention where after being told the stock’s current price they had to sell and then repurchase it for the same price 20-30mins later before choosing) ANOVA with reference point adaptation as the dependent variable showed: a main effect of outcome (updating more from gains than losses); no main effect of culture; and a significant interaction of culture and the sale/repurchase intervention. The interaction was driven by Asians showing more adaptation than the US subjects without the sale/repurchase intervention. This interaction was consistent with that shown in a further hypothetical experiment in the same study. A hypothetical experiment also showed reference point adaptation was also more for gains than losses in both cultures.

6.25. Second, loss aversion is weighting losses more than equally sized gains (Samuelson, 1963), i.e. that losses loom larger than gains. Arkes et al. (2010) above also included three datasets with hypothetical outcomes measuring loss aversion, of which two showed greater loss aversion in the US sample and one with a trend in that direction. Showing the opposite, another study reported more loss aversion in

Macao Chinese than UK participants in a hypothetical gift exchange task (Guo and Spina, 2016).⁸¹

- 6.26. Third, risk preference may be affected by whether outcomes entail gains or losses, for example in the reflection effect in Prospect Theory where individuals are risk-averse for gains and risk-seeking for losses (Kahneman and Tversky, 1979). Four studies also included in the risk section above manipulated hypothetical losses and gains. One found no effect (Sinha, 1996), while a second found Chinese more risk-taking than Americans in both the gain and loss frames (Brumagim and Wu, 2005). Two reported mixed effects, where in one the US sample showed more risk-aversion with losses than PRC Chinese but similar risk-taking with gains (Wang and Fischbeck, 2008), while in contrast a previous study by those authors describe US participants more risk-averse with gains and no difference in risk-taking with a loss decision (Wang and Fischbeck, 2004).
- 6.27. Fourth, one study examined hypothetical gains and losses in intertemporal choice (Gong et al., 2014). They report Chinese in China or abroad discounted more than a US sample with gains but had similar discount rates with losses.

Regret

- 6.28. We found no studies examining regret using an economic decision task.⁸²

Summary of non-social decisions

- 6.29. 13 studies in total directly compared East Asian and Western participants in non-social financial decisions, of which only one used real incentives. Findings were highly inconsistent over studies for risk and for intertemporal choice, and moderately inconsistent for gains versus losses. No studies examined regret.

NON-SOCIAL ASPECTS OF CHOICE			
Authors, year	Participants	Gender (M=Male) & mean age (years)	Subjects occupation
REAL INCENTIVES			
RISK (no studies)			
INTERTEMPORAL CHOICE (no studies)			
LOSSES AND GAINS			
Arkes et al. 2010	<i>Study 3</i> PRC & South Kor.: n=172 USA: n=119	<i>Study 3:</i> No info.	University students
REGRET (no studies)			
HYPOTHETICAL INCENTIVES			
RISK			
Arkes et al. 2010	<i>Study 2, Part 2:</i> PRC: n=92	<i>Study 2, Part 2:</i> No age & gender info.	University students

⁸¹ Note however that (Maddux et al., 2010) compare endowment effects between East Asians and Westerners, but argue that behaviour does not relate to loss aversion and that cultural differences emerge when self-object associations were made salient

⁸² One recent study published after our search has directly compared Chinese and UK participants in an economic regret task, finding no difference in the impact of regret between these two groups (Li et al., 2018).

	South Kor.: n=88 USA: n=118 <i>Study 4:</i> PRC: n=82 South Kor.: n=44 USA: n=151 <i>Study 5:</i> Asian as in <i>Study 4.</i> USA: n=169	<i>Study 4:</i> EA: 55%M; USA: 60%M No age info. <i>Study 5:</i> EA: 55%M; USA: 56%M No age info.	
Wang & Fischbeck 2008	PRC: n=37 USA: n=35,	PRC: 54%M, 21-32yrs USA: 43%M, 18-40yrs	University students,
Brumagim & Wu 2005	PRC: n= 275 USA: n= 140	PRC: 58%M, 22.9 yrs. USA: 51%M, 21.0 yrs.	University students
Lau & Ranyard 2005	Hong Kong: n=60, UK: n=60,	Hong Kong: 100%M UK: 100%M All participants: 20-60yrs	No occupation info.
Wang and Fischbeck 2004 (Marketing Bulletin) ⁸³	PRC: n=128 USA: n=53	No info.	PRC: no occupation info. USA: students
Fong & Wyer 2003	Hong Kong: n=158 USA: n=108,	No info.	University students
Hsee, & Weber 1999	<i>Study 1:</i> PRC: n=110 USA: n= 99 <i>Study 2:</i> PRC: n= 65 USA: n= 66	No info.	University students
Weber & Hsee 1998	PRC: n=85 USA: n=86 Germany: n=31 Poland: n=81	Mean ages of groups were 21-23yrs No gender info.	University students
Sinha 1996	Singapore (ethnic Chinese): n=69 USA: n=71 .	Singapore (ethnic Chinese): 21.1yrs. USA: 20.5yrs. No gender info.	University students
LOSSES AND GAINS			
Guo & Spina 2016	<i>Study 1:</i> Macao: n=99 UK: n=84 <i>Study 2:</i> Macao: n=151 UK: n=124	<i>Study 1:</i> Macao: 31%M, 18.9 yrs. UK: 30%M, 21.3yrs. <i>Study 2:</i> Macao: 40%M, 19.0yrs. UK: 38%M, 21.3yrs	University students

⁸³ In this report, I report data from their Experiment 2. Experiment 1 was a scenario about the purchase of health insurance, and we do not include these data for direct comparison as it is unclear how they may have been affected by attitudes to health and health provision in addition to risk. Wang and Fischbeck 2004 (J Risk Uncert) also examined attitudes to risk in health provision using survey data from one large US and one large Chinese survey.

Arkes et al. 2010	Study 1 & part 1 of study 2: PRC: n=89 South Kor.: n= 81 USA: n=81 Study 4: PRC: n=82 South Kor.: n=44 USA: n=151 Study 5: Asian as in Study 4. USA: n=169	Study 1 & part 1 of study 2: EA: 70%M; USA: 66%M No age info. Study 4: EA: 55%M; USA: 60%M No age info. Study 5: EA: 55%M; USA: 56%M No age info.	University students
Wang & Fischbeck 2008	PRC: n=37 USA: n=35,	PRC: 54%M, 21-32yrs USA: 43%M, 18-40yrs	University students,
Brumagim & Wu 2005	PRC: n= 275 USA: n= 140	PRC: 58%M, 22.9 yrs. USA: 51%M, 21.0 yrs.	University students
Wang and Fischbeck 2004 (Marketing Bulletin)	PRC: n=128 USA: n=53	No info.	PRC: no occupation info. USA: students
Sinha 1996	Singapore (ethnic Chinese): n=69 USA: n=71	Singapore (ethnic Chinese): 21.1yrs. USA: 20.5yrs. No gender info.	University students
INTERTEMPORAL CHOICE			
Gong et al. 2014	Chinese in PRC: n=77 Chinese aboard participants: n=110 USA: n=107	Chinese in PRC: 67%M Chinese aboard participants: 33%M USA: 47%M No age info.	National population
Kim et al. 2012	South Kor.: n=19 USA: n=14	South Korea: 47.3%M, 21.2yrs. USA: 64%M, 22.0yrs.	University students
Tan & Johnson 1996	Chinese ⁸⁴ : n=21 Canada: n=20	No info.	University students
REGRET (no studies)			

Table 6.3: *Behavioural economics: Non-social aspects of decision-making*. List of all included datasets, with details of the populations studied in each. Note that some studies appear in multiple sections as they included multiple datasets (e.g. Arkes et al., 2010). See Supplementary Tables S1 and S2 for full details of the tasks and findings used in each dataset.

SOCIAL DECISIONS

6.30. This section examines five social choice tasks. Table 6.4 summarises the studies and Supplementary Tables S3 and S4 detail each study's tasks and findings.

⁸⁴ Study conducted in Canada, the foreign students were from Hong Kong, Singapore, Malaysia and Indonesia. All of the foreign students were of Chinese descent.

Ultimatum Game

- 6.31. *Task description:* The Ultimatum Game (UG) aims to assay fairness. In the UG, one player (the Proposer) is given an endowment (e.g. £10) and proposes a division (e.g. keep £6/offer £4) to a second player (the Responder), who can accept (both get the proposed split) or reject (both get nothing) the offer (Güth et al., 1982). If individuals are maximising only their own payoffs, then Responders should accept any amount however small (1 penny is better than nothing) and, knowing this, Proposers should offer as little as possible. Actually, Proposers typically offer an average of 40% of the money (many offer half) and Responders reject small offers of 20% or so half the time (Camerer, 2003).
- 6.32. *Applications:* Understanding fairness can help analysts interpret and forecast others' decisions more accurately. For instance, deterrence analysis that ignores the drive to reject unfairness can't correctly forecast what is needed for actions to be deterred. How this affects deterrence is shown by considering the central concept in the U.S. Deterrence Operations Joint Operating Concept (DO JOC, 2006 v2). The left panel in Figure 4.4 below shows how in the DO JOC the audience chooses between two options (to act or show restraint) based on the costs and benefits associated with each. The right panel in Figure 4.4 then shows how in the ultimatum game the audience chooses between two options (to reject or accept) based on the costs and benefits associated with each – but, crucially, correct forecasting of behavior must include the value of fairness that drives them to reject. Now consider the DO JOC again, and see that when conducting a deterrence operation the social motivation of fairness may drive them to reject restraint, so deterrence fails.

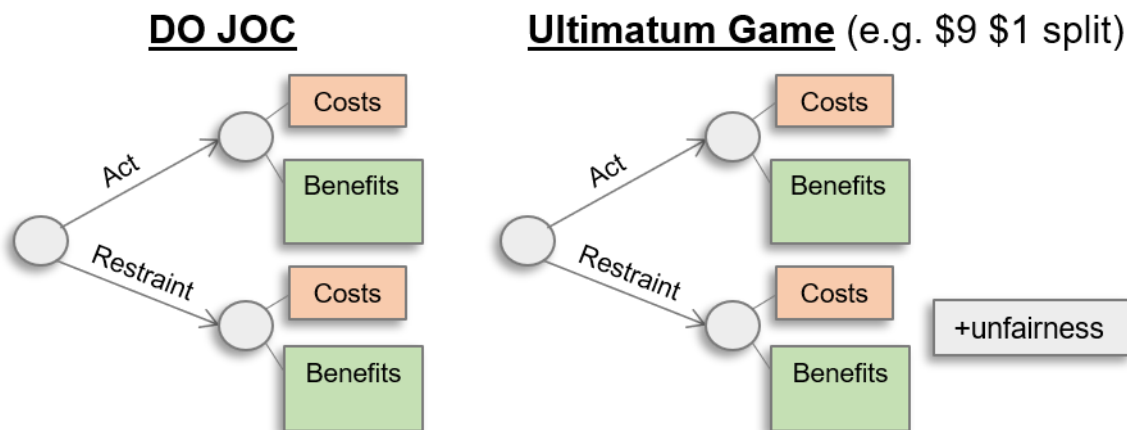


Figure 6.4 Deterrence, Fairness and the Ultimatum Game. 'DO JOC' refers to the US DoD Deterrence Operations Joint Operating Concept (2006).

- 6.33. *Cross-cultural findings:* In direct comparisons between cultures using real incentives, the four sets of results for Proposers were highly inconsistent, while the three sets of results for Responders tended towards showing no cultural difference. It should be noted, however, that both East Asian and Western samples exhibit the major behavioural regularities in this task, as Responders tend to reject lower offers and Proposers tend to make higher offers.
- 6.34. For Proposers, the four studies using real incentives reported inconsistent results. One study showed Japanese offer less than the US sample (Roth et al., 1991). This was partially supported by a second study showing a similar direction of effect with

Koreans offering less than Germans in an anonymous UG, but with no cultural difference in a non-anonymous UG where personal details were given (Horak, 2015). However, a third study reported no effect of nationality comparing Japanese and Austrians (Okada and Riedl, 1999), and a fourth suggests the opposite with Malaysian Chinese proposers making higher offer than UK proposers (Chuah et al., 2007).

- 6.35. For Responders the three studies using real incentives tended towards showing no cultural difference. Two studies found no effect of nationality, one for Malaysian Chinese compared to a UK sample (Chuah et al., 2007), and one for Japanese and Austrians (Okada and Riedl, 1999). One reported fewer rejections by Hong Kong Chinese than US participants (Chen et al., 2009).

Dictator Game

- 6.36. *Task description:* A variant of the UG, called the Dictator Game, enables us to ask if Proposers in the UG make such high offers because they are “fair-minded” or because of fear of rejection. Dictator Games are UGs with the responder’s ability to reject the offer removed – and here too Proposers do not offer zero, suggesting that behaviour is not only due to fear of rejections (Camerer, 2003).
- 6.37. *Cross-cultural findings:* One study directly compared East Asian to Western participants, and found that European Americans offered more than Koreans (Park et al., 2017).

Trust Game

- 6.38. *Task description:* The “trust game”(TG)⁸⁵ aims to assay willingness to trust and repayment of trust. In the TG, the first player (the Investor) is given an amount of money (e.g. \$20) each round and can invest any portion of it (e.g. \$10) with the second player (the “Trustee”). Then the investment triples, and the second player decides how much of the money to repay (e.g. returning \$13 and keeping \$17). Cooperation, in which higher amounts are invested and then paid back, benefits both sides but carries the risk of exploitation, so if both players are purely self-interested and won’t meet again then there should be zero cooperation. But actually people do tend to trust each other, and manage the careful balance between trust and mistrust (Camerer, 2003).
- 6.39. *Applications:* U.S. success in any likely escalation scenario—for instance with the PRC in the West Pacific or Russia in the Baltics—critically depends on US influence over key allied perceptions. An example is extended deterrence. The central foundation of extended deterrence is that the ally *trusts* and has *confidence* in the

⁸⁵ Here I use the term Trust Game to describe all these studies. However, some authors use the term Investment Game (IG). Although we do not use the distinction here, for completeness we note that (Cook et al., 2005) provide a discussion of the distinction between TG and IG: “The difference between the TG and the IG is in the nature of the choices for actors A and B. In the TG, both A and B make binary choices: A between trusting and not trusting, B between honoring and not honoring A’s trust. In the IG, they make continuous rather than binary choices: player A decides how much trust (indicated by level of investment) he or she will place in B, and player B decides how much to reciprocate the trust placed in him or her by A.”

US. For policy applications see my recent reports on Grey Zone conflict and on outer space operations.⁸⁶

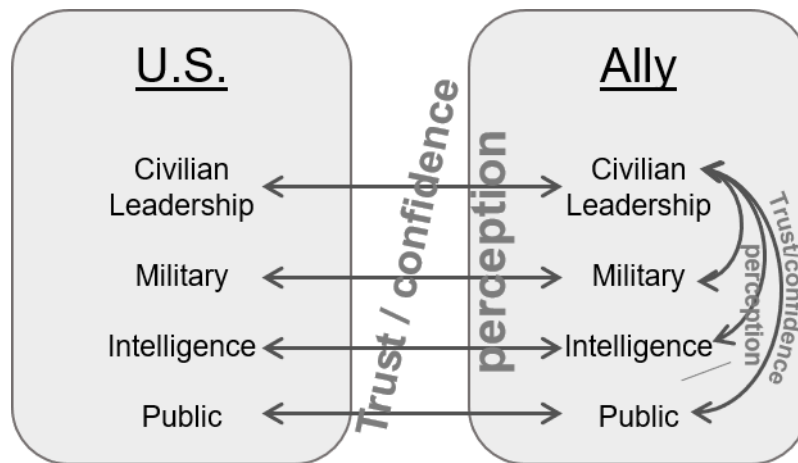


Figure 6.5 Trust and alliances

- 6.40. *Cross-cultural findings:* Relatively clear results are seen in direct comparisons between cultures using real incentives in the TG, where the seven studies reporting Investor behavior consistently show no cultural difference, and the seven studies reporting Trustee behavior show moderately consistently that East Asians return more than Westerners.
- 6.41. For Investors, seven studies using real incentives consistently report no cultural difference. Five studies show no effect of nationality on investment size (Akai and Netzer, 2012; Kiyonari et al., 2006; Kuwabara et al., 2007; Netzer and Sutter, 2009; Walkowitz et al., 2005). One shows a trend for Chinese to invest more than the US sample participants (Buchan et al., 2006). One shows that the amounts sent by both American and Chinese participants are higher than amounts sent by both Korean and Japanese participants (Buchan et al., 2002).
- 6.42. For Trustees, seven studies using real incentives report data. Five show East Asians return more than Westerners, and specifically: Japanese were more trustworthy than the US sample regardless of the partner's nationality and whether or not the trustor's nationality was known (Kuwabara et al., 2007); Japanese were more trustworthy than a US sample (Kiyonari et al., 2006); Chinese and Argentinians return more than the Germans (Walkowitz et al., 2005), and Chinese returned more than US participants (Buchan et al., 2006). No studies showed the reverse, with one showing a Japanese trend to return less than an Austrian sample (Netzer and Sutter, 2009), and another showing no difference between Japanese and Austrians in intra-national reciprocity (Akai and Netzer, 2012). One final study showed Chinese and Korean participants return more than both Japanese and Americans (Buchan et al., 2002).

Public Goods Game

⁸⁶ Wright (2019) *From Control to Influence: Cognition in the Grey Zone*; and Wright (2019) *MindSpace: Cognition in Space Operations*, Download from www.intelligentbiology.co.uk

- 6.43. *Task description:* In public goods games, each of N players can invest part of their resources in a public good that is shared by everyone indivisibly. The tension arises as the payoff maximising outcome for an individual is to be a “free-rider” and contribute nothing but still benefit from the public good, while if everyone contributed then the players would collectively earn the most (Camerer, 2003).



Figure 6.6 Public Goods Game and the tragedy of the commons. We all lose if we aren't influenced to collectively show restraint.

- 6.44. *Cross-cultural findings:* Three studies, all of which used real incentives, are moderately consistent that East Asians contribute less than Westerners at least under some conditions. One showed that Chinese contribute less than US participants (Sell et al., 2002). Another showed that Chinese contributed less than Germans in a complete anonymity, but there was no cultural difference in two other less anonymous conditions (Vu, 2016). The last used a public goods provision game between pairs where in each round participants must first announce whether to participate, and then how much to contribute – and showed that the Japanese participate more than a US sample, but that Japanese contribute less when only one of the pair participates and no cultural difference when both participate (Cason et al., 2002).

Prisoners' Dilemma Game

- 6.45. *Task description:* The classic game exploring the tension between cooperation and self-interest is the Prisoners' Dilemma Game (Flood and Drescher, 1950). A typical description is as follows. Two prisoners are brought in for questioning by the KGB and placed in separate cells. If both stay silent (i.e. cooperate), they both receive one year in prison. If they both accuse the other (i.e. defect) they both get four years in prison. If one stays silent and the other defects, the co-operator gets 10 years in prison and the defector gets off scot free. Game Theory makes a clear prediction: the only rational thing for both players to do is defect. This because whatever the other player does, defection is superior. In Game Theoretic terms, mutual defection is the only Nash equilibrium. However, if the two players could cooperate, then they would receive a mutually more beneficial outcome (known as a Pareto optimal outcome). What humans actually choose has been shown in literally thousands of experiments: subjects cooperate in one-shot PDGs about half the time (Camerer, 2003; Kagel and Roth, 1995).
- 6.46. *Cross-cultural findings:* Five studies in total, all of which used real incentives, reported mixed results across studies. Two studies show that Japanese were less cooperative than New Zealanders (Yamagishi et al., 2008b) and Australians (Yamagishi et al., 2005). In contrast, (Cook et al., 2005) finds that Japanese were initially more cooperative than Americans, although later there was no significant difference. Two further studies found cultural effects interacting with other factors. In one of these studies, cultural differences between Japanese and US participants in cooperation only emerged when manipulating information in a two-stage game

(Hayashi et al., 1999). In another, the participants were told they would play up to 30 rounds of an iterated Prisoners' Dilemma (they actually played 22) (Kuwabara et al., 2014). There was a manipulation of timing of defection where the opponent cooperated in all rounds except 1 and 2 (early trust violations) or 10 and 11 (late trust violations). A 2 timing of defection (early, late) x 2 culture ANOVA found no main effects, but found an interaction between timing and culture. In the US, early violations resulted in lower cooperation in the final five rounds than late violations; while in Japanese cooperated more in the final five rounds after early trust violations than late trust violations.

Summary of social decisions

- 6.47. 23 studies in total directly compared East Asian and Western participants in these five canonical social decision-making tasks, of which the great majority (22) used real incentives. In the Trust Game we found consistent evidence for no cultural difference in investor's decisions, and also that East Asian trustees repay more than Westerners. Findings were only moderately consistent for the Public Goods Game and highly inconsistent for the Ultimatum Game and Prisoners' Dilemma. Only one study assayed the Dictator Game.

SOCIAL ASPECTS OF CHOICE			
Authors, year	Participants	Gender & mean age	Subject occupation
REAL INCENTIVES			
ULTIMATUM GAME			
Horak 2015	South Kor.: n=155 German: n=143	South Kor.: 19-24yrs Germany: 19-42yrs No gender info.	South Kor.: University students German: University students and working adults
Chuah et al. 2007	Malaysian Chinese ⁸⁷ : n=186 UK: n=180	Malaysian Chinese: 53%M, 23.4yrs UK: 65%M, 23.4yrs	University students, Working adults
Okada & Riedl 1999	Japan: N=72 Austria: N=66	No info.	University students
Roth et al. 1999	Japan: n=58 USA: n=74 Israel: n=60 Yugoslavia: n=60	No info.	University students
Chen et al. 2009	Hong Kong: n=163 USA: n=127	Hong Kong: 30%M, 19.0yrs USA: 35%M, 20.0yrs	University students
DICTATOR GAME			
Park et al. 2017	Study 1: South Kor.: n=65 USA: n=101	Study 1: South Kor.: 42%M, 23.0yrs USA: 39%M, 19.4yrs	University students
TRUST GAME			
Akai & Netzer 2012	Japan: n=216 Austria: n=216	No info.	University students

⁸⁷ In the paper, Malaysian Chinese means only Malaysians of Chinese ethnic background were recruited.

Netzer & Sutter 2009	Japan: n=74 Austria: n=76	Japan: 86%M, 22.7yrs Austria: 63%M, 23.1yrs	University students
Kuwabara et al. 2007	Japan: n= 42 USA: n= 44	Japan: 4%M USA: 50%M No age info.	University students
Kiyonari et al. 2006	Japan: n=67 USA: n=60	Japan: 50%M; USA: 48%M No age info.	University students
Walkowitz et al. 2005	PRC: n=30 Germany: n=30 Argentina: n=30	No info.	University students
Buchan et al. 2006	PRC: n= 50 South Kor.: n= 50 Japan: n= 44 USA: n= 44	PRC: 71%M ⁸⁸ South Kor.: 96%M Japan: 86%M USA: 36%M No age info.	University students
Buchan et al. 2002	PRC: n=128 South Kor.: n=140 Japan: n=140 USA: n=140	No info.	University students
PUBLIC GOODS GAME			
Vu 2016	PRC: n=86 Germany: n=88	No info.	University students
Cason et al. 2002	Japan: n=60 USA: n=40	No info.	University students
Sell et al. 2002	PRC: n=20 USA: n=20	No info.	University students
PRISONERS' DILEMMA GAME			
Kuwabara et al. 2014	Japan: n=112 USA: n=93	Japan: 50%M, 20.4yrs. USA: 44%M, 22.3yrs.	University students
Yamagishi et al. 2008	Japan: n=48 New Zealand: n=55	Japan: 63%M New Zealand: 42%M No age info.	University students
Cook et al. 2005	Japan: n=192, USA: n=106	Japan: 60%M USA: 53%M No age info.	University students
Yamagishi et al. 2005	Japan: n=57 Australia: n=49	No info.	University students
Hayashi et al. 1999	Japan ⁸⁹ : n=148, USA: n=167	Japan ⁹⁰ : 74%M USA: 51%M No age info.	University students
HYPOTHETICAL INCENTIVES			
ULTIMATUM GAME			
Valenzuela et al 2005	South Kor.: n=164 USA: n=133	South Kor.: 48%M, 21.0yrs. USA: 44%M, 21.0yrs.	University students
TRUST GAME			

⁸⁸ Gender information from Croson & Buchan (1999)

⁸⁹ Japanese data were from Watabe et al., (1996).

⁹⁰ Japanese data were from Watabe et al., (1996).

Buchan & Croson 2004	PRC: n=48 ⁹¹ USA: n=44	PRC: 71%M ⁹² ; USA: 36%M No age info.	University students
DICTATOR GAME (no studies)			
PUBLIC GOODS GAME (no studies)			
PRISONERS' DILEMMA GAME (no studies)			

Table 6.4: Behavioural economics: Social aspects of decision-making. List of all included datasets, with details of the populations studied in each. See Supplementary Tables S3 and S4 for full details of the tasks and findings used in each dataset.

BRAIN IMAGING STUDIES OF VALUE-BASED CHOICE BETWEEN EAST ASIA AND THE WEST

- 6.48. Only one study met my inclusion criteria for any of the nine aspects of non-social or social decision-making we examine. This used MRI to compare Koreans and Americans in an intertemporal choice task with hypothetical incentives (Kim et al., 2012). Behaviourally, the authors found Americans discounted more steeply than Koreans (i.e. Americans were more impatient). MRI scanning during the task revealed that a brain regions associated with reward, the ventral striatum, was more greatly recruited in Americans than Koreans when discounting future rewards.
- 6.49. While not meeting my inclusion criteria, one other brain imaging study provided additional relevant results. Specifically, a recent MRI study compared Koreans and Americans on receiving monetary rewards in another's presence, and showed that this affected their value (Kang et al., 2013). MRI showed that in Koreans compared to Americans, the striatum and ventromedial Prefrontal Cortex (both regions involved in reward processing) more strongly encoded discrepancies between rewards randomly given to the self and another (Kang et al., 2013).
- 6.50. Thus, these imaging studies provide a promising start for comparing the neurobiology of value-based decision-making in East Asia and the West.

DISCUSSION OF BEHAVIOURAL ECONOMICS TASKS BETWEEN CULTURES

- 6.51. I systematically reviewed studies directly comparing key behavioural economics tasks in East Asian and Western populations. I focussed on nine key aspects of choice and also neuroimaging of such choice. Gross effects expected in those paradigms were seen in the bulk of the cases, such as the rejection of low offers in the Ultimatum Game. However, with the exception of the Trust Game and partial exception of the Public Goods Game, the cross-cultural findings were inconsistent.
- ***Bottom line for policymakers: Key aspects of decision-making such as responses to risk, losses or fairness are not shown to differ consistently between East Asian and Western individuals – making us more confident to extrapolate about such commonalities between cultures.***
- 6.52. Next in this discussion I consider more academic issues, and ask:

⁹¹ Participants actually played the game, and data reported in Buchan et al., (2006)-real money/ direct comparison

⁹² Gender information was from Croson & Buchan, 1999.

- *why were the results so inconsistent in terms of cross-cultural commonalities or differences?*
- 6.53. Firstly, numerous potential reasons for the inconsistent results exist that are hard to evaluate from the current literature due to poor recording of methods. This is illustrated by the poor recording of basic demographic data shown in Table 6.2. Effects of translations of instructions or experimenter demand (e.g. using local experimenters in each location) may play a role but are hard to assess in the current literature.
- **Recommendation for academics:** *The field should make a simple and cheap change to its practice – to better report their basic methods.*
- 6.54. A second reason may simply be that replication is difficult, particularly in social psychology, as indicated by the growing literature on the “replication crisis” (Collaboration, 2015).
- **Recommendation for academics:** *An increased focus on replication in the literature, and for out of sample testing within studies if possible.*
- 6.55. Third, were these findings related to the incentives used? Differing incentives were not a cause of inconsistencies within tasks – real incentives in the social paradigms we studied; and hypothetical incentives were overwhelmingly used in the non-social paradigms we studied. Moreover, there was no marked variation in the magnitude of the real incentives participants understood they would receive. One partial explanation for variability in the non-social tasks may relate to the overwhelming use of hypothetical incentives – as formal comparisons between hypothetical and real incentives in the West reveal some differences, in particular where hypothetical incentives lead to more variability in results (Camerer and Hogarth, 1999; Smith and Walker, 1993). Thus, our results suggest that using real incentives is feasible—they were applied in most social studies—and also applying these to non-social tasks may help improve the consistency of results.
- **Recommendation for academics:** *Where possible, use more real incentives.*
- 6.56. Fourth, were the findings related to heterogeneity between countries in our working categories of “West” and “East Asia”? This does not explain well explain our results. For example, as Table 6.4 shows Trust Game studies were conducted in a number of different East Asian (e.g. PRC and Japan) and Western (e.g. USA, Germany, Austria), but we found consistent results in the Trust Game – indeed, for both trustees and investors. In contrast, the bulk of studies of risk and of loss/gain asymmetries involved the PRC but both sets of results were highly inconsistent. Heterogeneity within Western and East Asian countries (e.g. subnational regions, social class or demographics) is more difficult to assess because much less data existed for such fine-grained comparisons and because of poor reporting (e.g. illustrated in Table 6.2). There may also be large changes in societies over time, for example between the studies conducted in the early 1990s and those conducted now some 25 years later. This will be particularly the case for a country such as China that is undergoing such rapid development.
- **Recommendation for academics:** *Future work should attempt to replicably test for intra-country and intra-regional effects, as well as change over time.*
- 6.57. Fifth, did different versions of experimental paradigms test different aspects of the decision variables surveyed? This is unlikely to be the case particularly in the social

tasks like the Ultimatum Game, where these canonical tasks are well described. However, it may be particularly problematic for a variable such as risk. Risk is not monolithic and the distinct aspects of risk identified in decision neuroscience (Bach and Dolan, 2012; Preuschoff et al., 2006; Tobler and Weber, 2014; Wright et al., 2012, 2013), such as outcome variance and skewness, have not been systematically tested cross-culturally.

➤ **Recommendation for academics:** *More widespread use of more sophisticated paradigms explicitly testing these different aspects of risk.*

- 6.58. Finally, another important finding here is that many studies do not fully report negative findings in their results – and this is crucial failing of the literature regardless of sources of inconsistency between studies, because commonalities between cultures are as, if not more, important than differences. Fuller reporting of formally tested negative findings within studies will help identify robust commonalities, as was revealed here for the Trust Game. Thus, one simple recommendation is that when testing more than two countries, one should report pairwise comparisons for key effects.
- 6.59. Limitations of this systematic review relate in part to some of the above discussion, for example our use of “East Asian” and “Western” categories. Furthermore, I only included studies examining canonical paradigms, which limits the breadth of my analysis, and ignores additional potential sources of information such as differing riskiness in the proverbs of Chinese and Western countries (Weber et al., 1998). It may be thought a meta-analysis of each task would be useful. However, given well-recognized challenges surrounding meta-analyses (Vrieze, 2018), particularly in light of the relatively small numbers of studies within each task, whilst meta-analyses may be interesting they are unlikely to better resolve potential sources of inconsistency than the descriptive approach taken here.
- 6.60. In conclusion, I identified positive findings in particular with respect to the Trust Game. However, I also highlight striking inconsistency in results for most tasks – and believe the field should be thinking “first things first” to tackle this fundamental challenge and seek to identify robust commonalities and differences between cultures in key aspects of human choice. I make a number of simple recommendations above, for instance related to the common failure to report basic aspects of the methods.
- **Key recommendation for academics:** *I suggest a new program of large, well-conducted experiments with transparent and freely available methods to examine core aspects of choice – in ways that can be readily replicated and later extended. Important extensions will be to subregions and different income or demographic groups, which have been insufficiently studied but will be important to build a sound understanding useful for policy.*

CHAPTER 6 ANNEX: METHODS FOR THE BEHAVIOURAL ECONOMICS SYSTEMATIC REVIEW

Searches and Inclusion Criteria

- 6.61. Our systematic search proceeded in three stages to identify primary articles.

6.62. *First stage:* I used nine sets of search terms, generated by using the “cross-cultural” terms described in Table 6.5 and then added one of the nine strings shown below that in Table 6.5 (e.g. for the Ultimatum Game). These combinations were used to search Web of Science, PsycINFO and EconLit databases in January 2018. Only English language journals were considered. This search yielded in total 2219 records that were exported into a reference citation manager where titles and abstracts were screened for relevance. This arose from our 27 separate searches, one in each of the three databases for each of the nine areas: Risk (Web of Science n=157; PsychInfo n=27; EconLit n=133); gains and losses (n=239; n=27; n=120); Intertemporal choice (n=125; n=23; n=33); regret (n=110; n=26; n=97); Ultimatum Game (n=122, n=56; n=59); Dictator Game (n=50; n=34; n=24); Trust Game (n=88; n=35; n=50); Prisoners’ Dilemma Game (n=189; n=51; n=78); Public Goods Game (n=121; n=52; n=93). See Supplementary Figures S1-S9 for details of inclusion and exclusion for each of the 27 searches.

SEARCH TERMS
<p>“Cross-cultural” (crosscult* OR "cross cult*" OR intercult* OR "inter cult*" OR Asia* OR China OR Chinese OR Taiwan* OR Japan* OR Korea* OR Singapore* OR (West* and East*))</p>
<p>All searches used the “Cross-cultural” string and one of those below:</p>
<p>NON-SOCIAL</p>
<p>“Risk” AND ((risk* OR gamb* OR uncertain* OR ambigu*) AND (((behavio\$ral OR experiment* OR game*) near/3 economic*)))</p>
<p>“Inter-temporal discounting” AND (((discounting) AND ((behavio\$ral OR experiment* OR game) near/3 economic* OR experiment)) OR ("inter-temporal discounting" OR "inter-temporal choice*" OR "hyperbolic discount*" OR "temporal discount*" OR "temporal choice*" OR "inter-temporal decision*"))</p>
<p>“Losses and gains” AND ((loss OR loss aversion) AND ((behavio\$ral OR experiment* OR game) near/3 economic*) OR (loss aversion))</p>
<p>“Regret” AND ((regret* OR guilt* OR disappointment* OR counterfact*) AND ((behavio\$ral OR experiment* OR game) near/3 economic* OR experiment))</p>
<p>SOCIAL</p>
<p>“Ultimatum game” AND (((behavio\$ral AND (experiment* OR game)) AND economic*) AND (justice OR fair*)) OR ("ultimatum game*" OR "ultimatum bargain*"))</p>
<p>“Dictator game” AND ("dictator game*" OR "dictator bargain*"))</p>
<p>“Trust game” AND (((behavio\$ral AND (experiment* OR game)) AND economic*) AND (trust)) OR ("trust game*" OR "investment game*"))</p>
<p>“Public goods game” AND (("public* good* game*" OR ((public good* OR cooperat*) AND ((behavio\$ral OR experiment* OR game) near/3 economic*)))</p>
<p>“Prisoners’ dilemma game” AND ("prisoner* dilemma game*" OR prisoner* dilemma)</p>

Table 6.5: Behavioural economics: Search terms. I used nine sets of search terms, generated by using the “cross-cultural” terms and then added one of the nine strings below.

The searches are in the format for Web of Science and there were minor syntax differences for EconLit and PsychInfo.

- 6.63. *Second stage*: I included studies if they reported direct statistical comparison of Western versus East Asian participants performing the task; were published in English; involved choosing between monetary incentives (real or hypothetical)⁹³; and included adult participants. By “Western”, I refer to countries in northwestern Europe (the United Kingdom, France, Germany, Switzerland, the Netherlands, etc.), and the mainly English-speaking societies of the United States, Canada, New Zealand, and Australia. By “East Asian”, I refer to Japan, Korea, China (the PRC, Hong Kong, Macao and Taiwan) and also to the ethnic Chinese population in Singapore and Malaysia.
- 6.64. *Third stage*: I identified further articles through ancestry (searching the reference lists of included articles) and descendancy (for recent included articles, we searched articles citing the included articles). These then underwent the inclusion/exclusion process described above. There were multiple iterations of this process. After duplicate data sets were excluded, this process generated 36 papers included in this review. Table 6.3 lists all included non-social studies and Supplementary Tables S1 and S2 details their methods and findings. Table 6.4 lists all included social studies and Supplementary Tables S3 and S4 details their methods and findings.
- 6.65. *Neuroimaging studies*: I identified these partly from the above searches and using ancestry and descendancy from those we identified as above. I sought expert advice. I also examined numerous recent reviews of cross-cultural behaviour and neuroscience (Ambady and Bharucha, 2009; Ames and Fiske, 2010; Han, 2015; Han et al., 2013; Han and Northoff, 2008, 2009; Kitayama and Uskul, 2011; Lehman et al., 2004; Rule et al., 2013).

⁹³ For example, we did not include studies examining risk-taking in academic or health choices. We also focussed on studies involving financial choices and so, for example, did not include studies where individuals rated their perception of risk.

Chapter 7 Second cut: More traditional cross-cultural psychology experiments

- 7.1. A second perspective on potential cultural effects on choice comes from more traditional cross-cultural psychology. Psychology rests upon a more diverse range of concepts—such as mental processes, emotions, cognition or identity—in order to explain individuals’ psychological functioning.
- 7.2. I examine four aspects of choice. For each I conducted a new systematic review of what was common and different between East Asian and Western individuals.
- Firstly, East Asians tend to engage in more context-dependent or holistic cognitive processes by attending to the relationship between a salient object and the context in which it is located. I identified 56 experiments, which provided moderately robust evidence for cultural differences.
 - A second contention relates to the nature of how others are influenced, which suggests a greater role amongst East Asians for social influence leading to adjustment, conformity and harmony. I identified 32 studies, which provided low to moderately robust evidence for cultural differences.
 - I also examined two contentions often discussed in relation to their policy relevance: that East Asians care more about face; and they have a more hierarchical understanding of society and social relationships. Very little work assayed face or hierarchy.
 - ***Bottom line for policymakers: Cross-cultural cognitive differences in context-dependence and social influence have a degree of robust support – and Part III examines policy implications of both.***
- 7.3. This chapter first provides an introduction and then a brief overview of methods (methods are full detailed in the end of chapter Annex). I then discuss evidence for each of the four contentions in turn and finish with a discussion.

INTRODUCTION

- 7.4. Whilst behavioural economics extends rational choice models, psychology explains individuals’ psychological functioning using a more diverse range of concepts such as mental processes, emotions, cognition or identity. Cross-cultural psychology is a subfield that examines the similarities and differences in such individuals’ psychological functioning in various cultural groups.⁹⁴ The extent of cross-cultural psychology work is indicated by some very highly cited papers, for example with over 22,800 citations⁹⁵ and numerous textbooks e.g. (Berry et al., 2011; Bond, 2010; Chiao et al., 2015; Heine, 2015; Kitayama and Cohen, 2007).
- 7.5. Cross-cultural psychology complements behavioural economics. Whilst behavioural economics paradigms typically arose from concerns such as whether or why individuals cooperate or care about fairness at all; cross-cultural psychology focusses more on potential cross-cultural hypotheses suggested by broader academic psychology, literature, philosophy or broader cultural concerns.

⁹⁴ For a discussion of definitions see Chapter 4 in this report.

⁹⁵ (Markus and Kitayama, 1991) had 22,816 citations on Google scholar, September 2019.

- 7.6. Cross-cultural psychology does not, unlike behavioural economics, have canonical tasks that can be crisply defined mathematically. One can, however, identify cross-cultural contentions that feature prominently across multiple authoritative reviews and textbooks (e.g. those cited above). Here I chose four contentions that are particularly relevant to value-based decision-making and policy. For each I reviewed empirical evidence that directly compares individuals from the West and East Asia in lab experiments. Two contentions have been the focus of much high-profile empirical and theoretical work in cross-cultural psychology.
- (1) The idea that westerners tend to engage in more context-independent cognitive processes by focusing on a salient object independently of its context, whereas East Asians tend to engage in more context-dependent or holistic cognitive processes by attending to the relationship between the object and the context in which it is located.
 - (2) A second high-profile contention relates to the nature of how others are influenced, which suggests a greater role amongst East Asians for social influence leading to adjustment, conformity and harmony.
- 7.7. I also examined two contentions that have been discussed in relation to their policy relevance.
- (3) East Asians care more about ‘face.’
 - (4) East Asians have more hierarchical understanding of society and social relationships.

METHODS OVERVIEW

- 7.8. First, I identified the contentions from cross-cultural psychology to examine, guided by prominence in the literature and potential policy relevance.
- 7.9. Next, to identify the bodies of empirical work for each contention, I conducted a review for each. This used authoritative reviews and databases to identify studies, which were then assessed for inclusion.
- 7.10. Finally, I evaluated the body of empirical studies for each contention. I gave greater weight to studies of behaviour rather than self-report, and those using non-student populations. I replication across studies and also looked for convergent evidence from multiple tasks and methods such as behaviour, child development and neuroscience methods.

CONTEXT-DEPENDENCE AND INDEPENDENCE

- 7.11. *Hypothesised cultural difference:* Westerners tend to engage in more context-independent cognitive processes by focusing on a salient object independently of its context, whereas East Asians tend to engage in more context-dependent or holistic cognitive processes by attending to the relationship between the object and the context in which it is located (Nisbett and Miyamoto, 2005). This is also referred to as holistic versus analytic or field-dependent versus field-independent cognition. Context is the setting or background of events or objects within which the focal object is located – and here culture is the independent variable that affects the degree to which context influences, for example, perception and action.
- 7.12. *Examples of laboratory tests:* These cultural effects are seen across diverse cognitive domains, such as perception, attention, memory and action (Table 7.1). For

instance, participants in a perceptual task view a rod in the context of a surrounding frame and must judge when the rod is vertical – when the frame is tilted, that context more greatly influences Chinese than Western perceptions (Ji et al., 2000). Another example tested memory for videos. East Asians were more likely to remember contextual background and the relationships between objects, and furthermore later on East Asians’ (but not Americans’) accuracy at recalling objects was affected by providing context (Masuda and Nisbett, 2001). In the ‘Framed Line Test’, participants must draw lines of a correct length that either use the context of a surrounding box or be independent of that context – and East Asians show much greater context-dependence when making these actions (Kitayama et al., 2003).

- 7.13. *Evaluating the body of literature:* Evaluated together, the body of evidence underlying this cross-cultural finding is moderately robust (56 studies included, details in Tables 7.1 and S5). I do not rate it as Low as there is a reasonably large body of studies showing reasonable replication in multiple tasks, or Strong as there are problems of replication in some tasks (e.g. memory), and little testing of generalisability across ages etc. The largest number of studies are of behaviour in adults, with 23 such studies identified. Findings replicated reasonably well across studies (Table 7.1 describes replication for each task). For example in the most studied single task, the Framed Line Test described above, three studies report greater context-dependence in East Asians than Westerners, one study showed an effect on reaction times, one study reported a difference in older but not younger adults and one study reported no cultural effect. Further, convergent supporting evidence includes tracking eye movements in facial recognition and neural data (23 studies identified, described in Tables 7.1 and S5).
- 7.14. *Policy implications:* Chapter 9 focusses on cross-cultural differences in context-dependence, which provides a framework explaining multiple differences in US and Chinese doctrine on offense, defense and deterrence.

Adult behavioural studies (n=23)
Framed Line test (n=6): three studies showed a cultural effect (Kitayama et al., 2003, 2009; Miyamoto and Wilken, 2010), one showed an effect on reaction time (RTs) but not choice (Hedden et al., 2008), one showed a difference in older but not younger adults (Zhang et al., 2014), and one showed no effect (Zhou et al., 2008).
Rod and Frame test (n=1): Showed effect (Ji et al., 2000).
Ebbinghaus illusion (n=2): Both showed effect (Caparos et al., 2012; Doherty et al., 2008).
Global-local task (n=1): Showed effect (Oishi et al., 2014).
Change blindness (n=2): Both showed effect (Masuda and Nisbett, 2006; Miyamoto et al., 2006).
Other tasks (n=5): Visual change detection, showed effect (Boduroglu et al., 2009); webpage comparison, showed effect (Dong and Lee, 2008); verbal stroop in two studies, both showed effect (Ishii et al., 2003; Kitayama and Ishii, 2002); dialectical self-scale showed effect (Zhang et al., 2014).

Memory (n=6): Two showed an effect(Chua et al., 2005; Masuda and Nisbett, 2001), two showed no effect(Chua et al., 2006; Evans et al., 2009), one showed no effect in one dataset but an effect in a footnoted follow up(Gutchess et al., 2006), and one showed an effect on specific memory but not on background(Millar et al., 2013).
Navon figures (n=2): One showed effect on RT but not error-rate (McKone et al., 2010) and one showed no effect(Caparos et al., 2012).
Convergent evidence:
Child Development (n=4+1): Three showed an effect(Duffy et al., 2009; Imada et al., 2013; Oishi et al., 2014), and one showed no difference in neurotypical but a cultural difference in autism spectrum participants(Koh and Milne, 2012). Another showed effect on eye tracking with faces (Kelly et al., 2011b).
Eye Tracking (n=15): Reasonable evidence for effects with faces (eight showed effect (Blais et al., 2008; Caldara et al., 2010; Jack et al., 2009; Kelly et al., 2010, 2011a, 2011b; Mielle et al., 2013; Rodger et al., 2010), one was equivocal(Rayner et al., 2007), one no effect(Or et al., 2015)), and highly mixed evidence for scenes (two showed effect (Chua et al., 2005; Goh et al., 2009) one was equivocal(Rayner et al., 2007) and three no effect(Evans et al., 2009; Mielle et al., 2010; Rayner et al., 2009)).
Neural (n=3): MRI: one showed a clear neural effect (Hedden et al., 2008), two unclear (Goh et al., 2007; Gutchess et al., 2006).

Table 7.1: Cross-cultural psychology: Contention 1, East Asians show more context dependence

HOW OTHERS' DECISIONS ARE INFLUENCED: ADJUSTMENT, CONFORMITY AND HARMONY

- 7.15. A second core contention from cross-cultural psychology relates to the nature of how others are influenced, with a greater role amongst East Asians for social influence leading to adjustment, conformity and harmony.
- 7.16. *Hypothesised cultural difference*: East Asians tend to understand their social world as more interconnected, so that an agent's behaviour, attitudes or perceptions will be more affected by others' opinions, attitudes or norms, and thus the agent shows more conformity or adjustment for social harmony. In contrast, Westerners understand their social world as more independent, so agents will have less sensitivity to social cues and more greatly value actions that affirm autonomy. Such cultural differences in social orientation have been discussed under the closely related concepts of independent and interdependent self-construal (Kitayama et al., 2007), individualism-collectivism that contrasts a primary concern for oneself relative to the group(s) to which one belongs (Heine, 2015), or tightness-looseness that reflects the strength of cultural norms and tolerance of deviant behaviour (Gelfand et al., 2011a).
- 7.17. *Examples of laboratory tests*: A variety of paradigms might be taken to bear on such a potential cross-cultural difference (Table 7.2) (Kitayama et al., 2007). One might examine recalling memories of styles of action. For example, North Americans compared to Japanese remembered more recent instances in which they "influenced

the surrounding” than “adjusted themselves to the surrounding” – a cross-cultural difference reversed for the adjusting episodes (Morling et al., 2002). One might examine the “correspondence bias”, whereby individuals attribute behaviors to people’s internal characteristics, even in heavily constrained situations. For example, when presented with vignettes about others’ pro- or antisocial behaviours, East Asians attributed greater weight to external social factors than did Westerners (Choi et al., 2003). Another method harnesses “cognitive dissonance”. For example, using a paradigm in which participants chose to rank objects (e.g. music CDs), Japanese showed greater dissonance in the presence of social cues (e.g. schematic pictures of eyes watching them) whereas European Americans’ dissonance was unrelated to social cue manipulations (Kitayama et al., 2004).

- 7.18. *Evaluating the body of literature:* Evaluated together, the body of evidence underlying this cross-cultural finding is low to moderately robust. It is not Low as some tasks show good replicability, although it is not higher given the limited number of such tasks and the limited (although promising) convergent laboratory evidence. We identified 29 adult behavioural studies (Table 7.2 details in Table S6). As Table 7.2 shows, for particular tasks there was reasonable replication for the cross-cultural differences, specifically with in the correspondence bias, cognitive dissonance and preferences for uniqueness. However, a number of other measures (e.g. “self-inflation” (Kitayama et al., 2009)) have not undergone similar multiple replications. Moreover, many studies used self-report measures rather than measuring behaviour, such as the task described above comparing recall of instances of influence (Morling et al., 2002). Furthermore, these lab studies show relatively little testing of generalisability, for example across ages (Table S6).
- 7.19. Convergent neural evidence from the laboratory⁹⁶ provides promising initial support for such differences, for example with neural data revealing different Western and Chinese responses to social deviations from social norms (e.g. dancing in an art museum) but not in a non-social (semantic) task (Mu et al., 2015). Finally, whilst an oft-cited meta-analysis of conformity in the classic Asch paradigm shows conformity correlates with individualism-collectivism and is highest in Fiji and Japan with ingroup peers, it does not clearly show it is higher in East Asia versus the West (Bond and Smith, 1996).
- 7.20. *Policy implications:* Chapter 10 focusses on cross-cultural differences in how others are influenced, which helps explain differences in US and Chinese strategic thinking about soft power and ‘bandwagoning.’

Adult behavioural studies (n=29+other tasks)
Preferences for harmony or uniqueness (n=5): All showed effect (Ishii et al., 2014; Kim and Drolet, 2003; Kim and Markus, 1999; Kinias et al., 2014; Yamagishi et al., 2008a).
Preferences on interconnected or independent types (n=1): Showed effect (Hashimoto and Yamagishi, 2015).

⁹⁶ For a discussion of survey results, please see the cross-cultural psychology discussion below.

Interconnected versus independent cognitive dissonance (n=4): All showed effect (Heine and Lehman, 1997; Hoshino-Browne et al., 2005; Imada and Kitayama, 2010; Kitayama et al., 2004).
Interconnected versus independent style of action (n=2): Showed effect (Morling et al., 2002; Taylor et al., 2004).
Dispositional/correspondence bias (n=11+2): Ten showed effect (Choi et al., 2003; Choi and Nisbett, 1998; Fausey et al., 2010; Kashima et al., 1992; Kitayama et al., 2009; Masuda and Kitayama, 2004; Miyamoto and Kitayama, 2002; Morris and Peng, 1994; Norenzayan et al., 2002; Zou et al., 2009), one didn't (Krull et al., 1999). Two further studies examined newspapers (Hallahan et al., 1997; Lee et al., 1996).
Engaging and disengaging emotions (n=2): Both showed effects (Kitayama et al., 2006, 2009).
Self-inflation (n=1): Showed effect (Kitayama et al., 2009).
Happiness as personal or social harmony-related (n=1): Showed effect (Kitayama et al., 2009)
Twenty statement test: Numerous studies, which broadly show effects but disputes on self-report and interpretation (reviewed in e.g.(Berry et al., 2011)).
Self-enhancement, self-esteem (Heine et al., 1999), self-serving biases (Norasakkunkit and Kalick, 2002): Numerous studies, but consistent effects debated (reviewed in e.g.(Berry et al., 2011)).
Additional evidence:
Neural (n=3): MRI (n=2): one showed cultural effect in norm violation detection (Kang et al., 2013), one showed behavioural but not neural differences (Korn et al., 2014). EEG study showed differing responses to social deviations (Mu et al., 2015).
Conformity meta-analysis: Of Asch paradigm shows conformity correlates with individualism-collectivism and is highest in Fiji and Japan with ingroup peers (Bond and Smith, 1996).
Surveys: Effects seen across multiple related metrics, e.g. individualism-collectivism (for review see e.g. (Heine, 2015) pp. 217-222, discussion see e.g.(Vignoles et al., 2016), meta-analysis(Oyserman et al., 2002)) or tightness/looseness (Gelfand et al., 2011b).

Table 7.2: Cross-cultural psychology: Contention 2, interconnectedness, adjustment and harmony

FACE

- 7.21. Face is held to be a critical driver of the behaviour of East Asian individuals, such as Chinese (Bond, 2010) and Koreans (Kim, 1993). Face essentially defines a person's place in their social network, and is a measure of social worth that can be earned, lost or given away. Understanding face in East Asian cultures is taken to be crucial, for instance to business negotiations in China (Graham and Lam, 2003) as well as China's domestic politics and behaviour in international arenas (Gries, 2004; Shambaugh, 2013; Wang, 2012). However, it is unclear whether East Asian face

really differs from Western concerns for dignity and prestige. The need for empirical evidence at the individual level is all the more important because it is argued that, for example, as one chapter on the psychology of face and morality in Confucian society begins: “Concepts of face in Confucian society are too complicated to understand for many Westerners in contact with Chinese people for the first time” (Hwang and Han, 2010). So what direct empirical evidence is there?

- 7.22. Unfortunately, very little evidence directly compares behaviour in East Asian and Western populations – with only two studies providing some initial tentative evidence. One experimental study examined the self-reported emotional responses of Chinese and U.S. students to short scenarios, some of which included international interactions. It found potential cross-cultural differences in some of the various experimental manipulations, which have not to our knowledge yet been replicated (Hays Gries et al., 2011). A second study asked participants from China, Germany, Japan, and the United States to recall a recent interpersonal conflict and respond to a series of items about the conflict, some of which related to “face” (Oetzel and Ting-Toomey, 2003). They found face concerns across cultures, which may manifest somewhat differently.

HIERARCHY

- 7.23. A fourth contention suggests that individuals from East Asian societies such as China understand the organization of society—and how society should be organized—as particularly hierarchical (Liu et al., 2010; Ng, 2010). This is not only argued to relate to domestic politics (Ng, 2010), but even to profoundly shape views of the international order. Indeed, the influential Chinese scholar Yan Xuetong discusses the idea’s importance for the global order in his book ‘Ancient Chinese Thought, Modern Chinese Power’ (2013) – a book Henry Kissinger described as ‘A fascinating study’. Such views are also articulated with respect to hierarchy and Japanese or Korean thinking (Park, 2017). But what direct empirical evidence exists comparing East Asiana and Western individuals?
- 7.24. Again, unfortunately I found little such evidence. One study reported that East Asians have more positive associations with hierarchy than Westerners (Brockner et al., 2001). Another study was not lab-based, but using a questionnaire found subjective social status more strongly predicted some aspects of subjective well-being in the US than Japan; whilst objective social status more strongly predicted aspects of subjective well-being in Japan than in the US (Curhan et al., 2014). Illustrating the lack of direct comparative evidence, a recent review noted interesting potential differences, but reported little direct comparative experimental evidence, particularly in controlled laboratory conditions (Miyamoto, 2017).

DISCUSSION

- 7.25. I examined two particularly prominent contentions within cross-cultural psychology – and I found moderately robust evidence for *context-dependence* and low/moderately robust evidence of a greater role amongst East Asians for *social influence leading to adjustment, conformity and harmony*. Future basic research should focus on better understanding how robust and replicable these two contentions are across diverse

situations and populations, for instance by harnessing big data approaches described in Chapter 8.

- 7.26. Differing context-dependence and expectations about how social influence affects others may also help shape policy interventions. Part III of this report examines how these ‘cultural thoughtways’ have shaped multiple aspects of US and Chinese strategic thought, for instance about deterrence, defense and offense. Policymakers seeking to deter extremist or other undesirable actions may use these insights, for instance when implementing influence campaigns. Better understanding of context-dependence could help better optimize the impact of social media messages sent within the context of social media feeds. A greater role amongst East Asians for social influence leading to adjustment, conformity and harmony suggests that harnessing social norms may be an even more powerful tool in such cultural environments.
- 7.27. Face and social hierarchy are also thought to matter for policy, but we have very little direct comparative evidence for cross-cultural commonalities or differences – and this can be a focus for future work.
- 7.28. As Chapter 6 discusses for behavioural economics, future research should address a number of basic factors such as heterogeneity within regions and across social classes. Again, this may benefit from the big data approaches discussed in Chapter 6. In addition to these more generic challenges for cross-cultural research, two more challenges in particular face this more traditional cross-cultural psychology literature.
- 7.29. A first challenge relates to the interlinked nature of the concepts under examination – indeed context dependence, social interconnectedness, face and hierarchy are all enmeshed. Thus, any division like the one used in this report has an inherently arbitrary character. Moreover, such concepts may be further broken down – for instance the second contention related to social influence leading to adjustment and harmony could be further parsed into actions (as adjustment or influence) or self-versus other-centricity (Kitayama et al., 2007). The conceptual and experimental approaches used to study these phenomena also renders meta-analysis difficult without introducing bias, which is known to be a particular problem for meta-analyses (Vrieze, 2018).
- 7.30. A second problem is that often the tasks use explicit (e.g. verbal) rather than implicit measures. This introduces a host of problems, for instance regarding linguistic differences. The computational metrics suggested in the Chapter 8 (e.g. Wright et al., 2018; Li et al., 2018) help contribute to emerging attempts to develop more implicit rather than explicit cross-cultural research methods (Kitayama et al., 2009).
- 7.31. In sum, our results here again suggest the importance of first things first: we have a lot of interesting theory in cross-cultural psychology and many promising results, but perhaps there should be a greater focus on large, transparent studies to test the replicability and generalizability of basic findings such as those related to context dependence and social influence. Computational approaches provide one promising avenue to achieve this, to which the next chapter turns.

CHAPTER 7 ANNEX: METHODS FOR CROSS-CULTURAL PSYCHOLOGY SYSTEMATIC REVIEW

- 7.32. First, I identified the contentions from cross-cultural psychology to examine. Unlike behavioural economics there is a no neat, mathematically defined set of canonical tasks or ideas. Thus, prominence in the literature and potential policy relevance guided the choices. Two were chosen as they have been the focus of much high-profile empirical and theoretical work in cross-cultural psychology, as highlighted consistently across a wide range of authoritative reviews (Ambady and Bharucha, 2009; Ames and Fiske, 2010; Han, 2015; Han et al., 2013; Han and Northoff, 2008, 2009; Kitayama and Uskul, 2011; Lehman et al., 2004; Rule et al., 2013) and textbooks (Berry et al., 2011; Bond, 2010; Chiao et al., 2015; Heine, 2015; Kitayama and Cohen, 2007). The first related to ideas of context dependence and independence. The second related to the nature of how others are influenced, which suggests a greater role amongst East Asians for social influence leading to adjustment, conformity and harmony. I also examined two contentions that have been discussed in the cross-cultural psychology literature (Bond, 2010), but in particular have been discussed in relation to their policy relevance (Gries, 2004; Park, 2017; Yan, 2013). Third, that East Asians care more about “face”. Fourth, East Asians have more hierarchical understanding of society and social relationships.
- 7.33. Next, in order to identify the bodies of empirical work for each contention, I conducted a review for each that proceeded in three stages to identify primary articles. It was conducted in April 2017. Again, as unlike in behavioural economics there is a no neat set of canonical tasks or ideas here, we did not ground our search in databases. Thus, I acknowledge that this review may less comprehensive than that carried out for behavioural economics above. First, potential articles were identified using the numerous authoritative reviews and textbooks noted above. Second, studies were included that directly statistically compared Western versus East Asian participants (regional definitions as in the behavioural economics review) in controlled laboratory experiments (theoretical studies were excluded). Here, meta-analyses were also included where existing. Third, from these starting points, using the databases in Chapter 4 and Google Scholar further articles were identified through ancestry (searching the reference lists of included articles) and descendancy (searching articles citing recent included articles). Multiple iterations of this process occurred.
- 7.34. Finally, I then evaluated the body of empirical studies for each contention. I gave greater weight to studies of behaviour rather than self-report, and those using non-student populations. I assessed how far findings were replicated across studies, whilst acknowledging a probability of non-replication even in robust tasks. I looked for convergent evidence from multiple different tasks and methods such as behaviour, child development and neuroscience methods.

Chapter 8 Third cut: cultural computations – brains, big data and Artificial Intelligence

- 8.1. A third way to understand choice examines the *computational processes* in the brain by which humans and other animals decide. Essentially, the brain's algorithms.
- 8.2. Computational approaches have enabled rapid advances in neuroscience over the past quarter century – and been key to the recent leap in artificial intelligence (AI).
- 8.3. Cross-cultural work using computational approaches is just beginning, and I examine two policy-relevant examples: (a) The neural phenomenon of 'prediction error'; and (b) 'Metacognition' or 'thinking about thinking.'
- 8.4. Cross-cultural computational approaches hold huge future promise, enabling powerful tools to examine choice **all the way from the brain to big data and AI.**
- 8.5. I discuss five advantages of these computational approaches, which:
 - Bring together diverse disciplinary approaches, e.g. providing mathematical language to capture insights from more traditional cross-cultural psychology and behavioural economics.
 - Enable the same computational analyses across mutually reinforcing methods at different scales: e.g. carefully controlled lab experiments; brain imaging; and big-data platforms in thousands of people.
 - Through big data enable testing of more diverse populations, e.g. older, less educated and less wealthy.
 - Directly apply to analysing behaviour in environments like social media. Cross-cultural cognitive science can inform models used in media analyses. Also, social media can identify cultural biases to test in the lab.
 - Fifth, computational neuroscience has been key for recent advances in AI. Cross-cultural differences matter for AI, e.g. human-machine teams, which often beat both humans or machines alone.
- 8.6. **Bottom line: This is a crucial new area in which the Chinese and others are investing mightily. Computational approaches discussed here provide a new path forwards for cross-cultural cognitive research – with implications for big data, social media and AI.**
- 8.7. I begin this chapter with an introduction, followed by two examples of cross-cultural computational approaches, and then five advantages of computational approaches.

INTRODUCTION

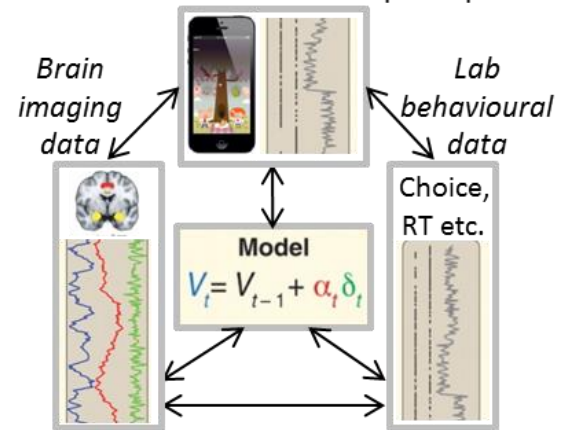
- 8.8. The computational processes in the brain by which humans and other animals make decisions have been the subject of rapid scientific advances over the past two decades (Behrens et al., 2009; Dayan, 2008; Dolan and Dayan, 2013; Glimcher and Fehr, 2013; Rangel et al., 2008). By computations I mean the information processing mechanisms by which brain systems make decisions. It may be an 'algorithm', for example, which could be thought of as list of instructions a bit like in a recipe. Figure 8.1 shows one such a recipe in the middle panel, which contains parameters that represent computations in the brain. One can then measure these different computations against different types of data – which as Figure 8.1 shows could be

from the brain or behavior. This gives us evidence for, or against, a particular computational model of decision-making.

- 8.9. Indeed, the brain could plausibly work in many different ways and it's often very hard to know which models are more likely to be correct just by looking at people's behavior or getting their subjective opinions. But by specifying particular computations by which humans choose, we can then look for those within the brain (e.g. using brain imaging) and compare how well different computational models of decision-making explain behavior – even in big data samples of tens of thousands of people.

- 8.10. Whilst much of this work has not considered potential cultural influences, this has recently begun to change (Li et al., 2018; Wright et al., 2018). I discuss two examples next. However, as this cross-cultural approach is in its early stages, little empirical cross-cultural work has been conducted, and so later in this chapter I will focus more on the field's potential.

Smartphone-based data: Tens of thousands of diverse Chinese and UK participants



Computational modelling of behaviour: Enables the same analysis in all methods – to simplify and unify.

Figure 8.1 Robust and generalizable methods (bottom panels adapted from Behrens et al., 2009) RT is 'reaction time.'

CULTURAL COMPUTATIONS: TWO EXAMPLES

The neural phenomenon of “prediction error”

- 8.11. A core insight of decision neuroscience is the central role played by neural “prediction error”—the difference between what occurred and was expected—in how humans and other animals learn and choose (Friston, 2010; Schultz et al., 1997). More traditional cross-cultural psychology suggests that East Asian mental models give different expectations to those in Westerners, and that East Asians report different responses to deviations from those expectations – giving hypotheses for differences in expectations and prediction errors.
- 8.12. A recent study by Wright et al. (2018) tested such cross-cultural hypotheses within a computational framework. They compared UK and Chinese participants in a probabilistic associative learning paradigm that assayed the behavioural effects of prediction error as a function of learned expectations. They applied a hierarchical Bayesian learning model to capture individual differences in learning across trials (Berker et al., 2016; Iglesias et al., 2013; Lawson et al., 2017; Mathys et al., 2014; Ouden et al., 2010). They made three hypotheses based on more traditional cross-cultural psychology.
- The first related to previous findings that South Koreans report less surprise than Americans after unexpected outcomes in vignettes (Choi and Nisbett,

2000); and that in the U.S., people born in East Asia report less pleasure at a surprise gift than those U.S. born (Valenzuela et al., 2010). Thus, they hypothesised that objective measures of behavioural prediction error (e.g. on reaction times) would support the previous work that had used subjective reports, so that Chinese participants would show reduced effects of prediction error on reaction times.

- Second, they predicted that how fast people learn (called ‘learning rates’ in the computational model) will indicate that Chinese learn more readily than Westerners about probabilistic associations, consistent with previous work indicating greater sensitivity to covariation (Ji et al., 2000).
- Third, prior research suggests that Chinese participants are more likely than Western participants to predict that previous conditions will reverse (Ji et al., 2001). An established computational measure of changeability is ‘volatility.’ Thus, if Chinese participants anticipate greater rates of environmental change this predicts an effect of culture on volatility learning – which would manifest as either a greater volatility learning rate, reduced learning rate update in response to volatility (indicating greater tolerance of change) or cultural differences in the effect of volatility on behaviour.

- 8.13. The hierarchical Bayesian model adopted by Wright et al. (2018) could test each prediction. There was no effect of culture learning about volatility, although the data did suggest that Chinese individuals learn more readily about probabilistic relationships. Intriguingly, culture did not affect sensitivity to prediction error in this task, which may relate to differences in social and non-social prediction errors (discussed in the next paragraph), or be explained by reference to ‘metacognition’ (discussed in the next subsection).
- 8.14. Prediction errors are fundamental across brain systems involved in such social and non-social decision-making (Behrens et al., 2009; Rangel et al., 2008), and this may provide fruitful avenues for future cross-cultural research. Many of the subjective reports of altered surprise in East Asian participants tend to involve stories or test conditions related to interpersonal interactions, whereas for instance Wright et al. (2018)’s task involved purely perceptual decision making. Recent research in the domain of social learning suggests that Chinese participants update their beliefs about others’ character traits more readily in light of social feedback (Korn et al., 2014). Moreover, cross-cultural work suggests social expectations (e.g. norms) and their violations more strongly influence East Asians than Westerners – and a recent study using Electroencephalography (EEG) showed different Western and Chinese responses to social deviations from social expectations (e.g. dancing in an art museum) but not in a non-social (semantic) task (Mu et al., 2015). Thus, future work can extend computational metrics of contingency learning to socially framed tasks (Behrens et al., 2009; Sevgi et al., 2016).

Policy implications of prediction error

- 8.15. Prediction error directly relates to strategy at multiple scales. It simplifies across many aspects of strategy, where managing shock and surprise is a central problem for deterrence, offense and escalation management. For multiple discussions see my previous reports available on www.intelligentbiology.co.uk. For instance:

- An introductory discussion (Wright, 2014);
- Prediction error in both Chinese and US doctrine (Wright, 2019 in *Behavioural economics and Nuclear Weapons*)
- Prediction error in Grey Zone conflict involving the DPRK's use of prediction error (Wright, 2018 *Getting Messages Through*, 17-20);
- Cognition and outer space, particularly Chapter 5 on space in Grey Zone conflict (Wright, 2019, *Mindspace*);
- Prediction error is critical for counterinsurgency, in which it encapsulates David Kilcullen's key principle (the 'theory of competitive control'), see e.g. Wright 2019 *From Control to Influence*; and
- Prediction error is key to messaging, for example by ISIL on social media - and last year a massive MIT study came out on the spread of fake news that precisely bore out my forecasts.

“Metacognition” – subjective reports and radicalisation

- 8.16. Metacognition is the human capacity for “thinking about thinking” (Fleming et al., 2012; Frith, 2012). Metacognition plays a central role in decision-making by facilitating the monitoring and control of behaviour, and the communication of subjective beliefs to others (e.g., “How certain are you?”). This is critical in environments with absent or sporadic feedback, characteristic of many real-world scenarios. Metacognition can also be applied to the thought of others, in which case it is called mentalizing. Metacognition enables us to reflect on and justify our behaviour to others. Computational approaches have powerfully contributed to recent advances in our understanding of metacognition (Fleming and Lau, 2014), and promise new exciting cross-cultural approaches.
- 8.17. With respect to metacognition and prediction error, much of the computational literature focusses on objective measures of prediction errors' impact, where bigger prediction errors have bigger effects on future choices. However, prediction errors also have subjective impacts, for example on self-reports of surprise or wellbeing – and these are reflected neurally (Rutledge et al., 2014). Culture may markedly affect these subjective impacts whilst leaving objective measures of prediction errors unaffected – which would explain previous work showing East Asians' subjective reports of surprise differ from those of Westerners (Choi and Nisbett, 2000; Valenzuela et al., 2010);
- 8.18. More broadly, whether key aspects of metacognition vary between cultures is poorly understood – and requires further research. More traditional cross-cultural psychology has identified promising avenues for investigation. For instance, a number of studies have found that Chinese subjects are more overconfident than both their American and Japanese counterparts when reporting confidence in general knowledge (Yates et al., 1989, 1997, 1998). However, such early measures of confidence conflated performance, confidence and metacognitive accuracy – and modern computationally based techniques can tease these apart (Fleming and Lau, 2014).
- 8.19. Metacognition can also help explain important phenomena such as political extremism or radicalisation, highlighting the importance of understanding whether and how metacognition may differ between cultures. Radicalization has been linked

to systematic differences in the certainty with which people adhere to particular beliefs. One recent study conducted in the West showed that individuals holding radical beliefs (as measured by questionnaires about political attitudes) displayed a specific impairment in metacognitive sensitivity about low-level perceptual discrimination judgments (Rollwage et al., 2018). Specifically, more radical participants displayed less insight into the correctness of their choices, and reduced updating of their confidence when presented with post-decision evidence. The use of a simple perceptual decision task enabled the authors to rule out effects of previous knowledge, task performance and motivational factors underpinning differences in metacognition. Instead this work suggests that a generic resistance to recognizing and revising incorrect beliefs may drive radicalization. Future work seeking to understand the cognitive processes underlying radicalisation must harness a modern understanding of the cognitive processes underlying human decision-making.

Policy implications of metacognition

- 8.20. Such work helps understand an important policy challenge—radicalisation—in terms of an underlying computational decision-making framework. Radicalisation is a global challenge that manifests across highly diverse cultures. Future work must ascertain whether, and how, key quantities in the underlying framework—such as metacognition—are common or differ between cultures.
- 8.21. See Wright (2018) The neuroscience, psychology and practice of target audience self-report,

FIVE ADVANTAGES OF COMPUTATIONALLY-GROUNDED ACCOUNTS

- 8.22. Next, I outline five advantages of using computationally grounded accounts of choice – which together argue this will form a central plank of future research to understand cognition across cultures for policy, science and business.
- 8.23. I do not suggest computational methods obviate the need for other methods, for example detailed ethnographic work, but help provide a powerful complementary set of tools that can go from the brain to big data and AI.

Combining concepts

- 8.24. Firstly, computational accounts help bring varied approaches together. For example, the biological study of decision-making has a long tradition (Mackintosh, 1983; Thorndike, 1911) and since the turn of the millennium has been combined with behavioural economics – a combined approach often referred to as neuroeconomics (Camerer et al., 2005; Glimcher, 2004; Glimcher and Rustichini, 2004). A computational framework can encompass cross-cultural findings from behavioral economics, and provides a mathematical language in which to capture insights from more traditional cross-cultural psychology as described above (Wright et al., 2018). This perspective is not reductionist and complements others, such as anthropology.

Convergent methods – computational analyses as an analytic spine

- 8.25. Secondly, neural computations simplify and unify analysis across data types. This provides new routes to identify findings robustly, which can build on successful methods used within cultures such as in the UK's "Great Brain Experiment" (Brown et al., 2014; Rutledge et al., 2014). The Great Brain Experiment coupled controlled lab experiments with behavioural big data from the *same* tasks on a smartphone app, to assess generalisability across tens of thousands of diverse participants. Great Brain Experiment results from big data showed the comparable findings to those obtained by controlled lab testing (Brown et al., 2014). Crucially, such methods would be highly ambitious if not radically simplified by using the same computational analysis across all methods to give very low extra marginal effort across methods (Brown et al., 2014; Rutledge et al., 2014). Similarly, one can also run brain imaging experiments, and thus test computational models behaviourally and their internal components neurally (Fig. 6.1). One can thus use the same computational analyses across mutually reinforcing methods, for example:
- Lab behaviour: Individuals take tasks in carefully controlled conditions.
 - Brain imaging: Functional and structural MRI or other modalities can examine the neural bases of behaviour.
 - Big-data platforms (e.g. smartphone apps or Amazon's Mechanical Turk) in thousands or tens of thousands of participants.

Generalizability

- 8.26. Using computational approaches as an analytical spine for multimethod studies enables one to test the same computations neurally and behaviourally under controlled lab conditions – as well as across diverse social groups to aid generalizability. In the Great Brain Experiment's first 27,546 participants, for instance, over 10,000 of them were not university educated and over 3,000 were aged over 50 (Brown et al., 2014).
- 8.27. One can use similar techniques in key East Asian countries to test diverse populations, and compare them with diverse Western populations. Chinese smartphone ownership, for instance, at 58% is similar to the West (e.g. France 49%, Germany 60%, UK 68%), is growing rapidly, and gives comparable access to the older, less educated and less wealthy (Poushter, 2016) to test diverse participant groups.

Social media analyses

- 8.28. A fourth advantage of computational approaches is that they directly apply to analysing human behaviour in environments such as social media. Thus, linking culture and computational approaches directly links culture to social media.
- 8.29. We know that key aspects of human neural computations, such as "prediction error", matter in social media data. Recent high-profile work has shown that the spread of news online in social media was critically affected by its novelty or surprise (Vosoughi et al., 2018). As described above, culture may markedly affect the subjective impacts of prediction error, which thus provides testable hypotheses for cross-cultural analysis of social media.

- 8.30. More broadly, empirically-based findings from cross-cultural cognitive science can inform the models in such media analyses – providing useful prior evidence to potentially improve models as well as testable hypotheses. I give three examples.
- (i) Context seemingly matters differently in different cultures as described above. Does the dynamic context of a message within sequences of messages over time affects that message?
 - (ii) Cross-cultural analyses of press coverage—for example of murders or sporting events—suggests arguments focus more on environmental factors in some cultures (e.g. social factors driving one to murder) and in other cultures focus more on the actor’s internal motivations (Hallahan et al., 1997; Lee et al., 1996). This is testable in big data.
 - (iii) Cross-cultural differences emerge in how cultures treat arguments containing multiple contradictory pieces of information. East Asian cultures, for instance, can treat a proposition as less plausible if it is contradicted, whilst Americans may actually find a proposition more plausible if it is contradicted (Peng and Nisbett, 1999). Again, this testable in big data.
- 8.31. We can also reverse the direction of information flow between disciplines, so that social media can identify cultural biases that can be tested in the lab. This will provide a new source of cross-cultural insights. Currently, understanding group biases—implicit or explicit interpretations and preferences—often requires painstaking individual ethnographic studies that can take many months of work, and which give a single snapshot of a cultural group at a fixed point in time.⁹⁷ Interestingly, machine-learning algorithms often come to learn and reflect the biases that are implicit in the data on which those algorithms are trained. This often otherwise unwelcome bug of machine learning to learn non-obvious biases from large datasets may thus, if for instance carefully applied to large social media datasets, also provide new insights about different cultural models.

Artificial Intelligence

- 8.32. Finally, computational neuroscience has been a central driver of recent advances in AI. AlphaGo, the AI that recently beat the world’s top go players, was built by arguably the world’s leading AI lab – who explicitly draw on computational neuroscience (Hassabis et al., 2017). Much cutting edge AI draws on computational neuroscience (Hassabis et al., 2017; Kriegeskorte and Douglas, 2018). Chinese Government AI schemes also stress the importance of links with cognitive science (Wright, 2018a).
- 8.33. Why would potential cross-cultural differences matter for AI? One example is that many of the most powerful uses of AI involve human-machine teams, which often beat both humans or machines alone. These human-machine teams require teamwork. But how can humans and machines communicate to make good decisions together? Understanding the human brain's computations tells us how machines can become better team players, by communicating in ways humans use. For example metacognition is important for communication in teams (Bahrami et al., 2010; Frith, 2012), such as when communicating confidence (e.g. noting how confident each

⁹⁷ The US Defense Advanced Research Projects Agency has recently shown interest in this area.

team member is when making estimates). Computational approaches will help construct a human-machine lingua franca, one more understandable to both.

CONCLUSIONS

- 8.34. A third way to understand choice examines the *computational processes* in the brain by which humans and other animals decide. Essentially, the brain's algorithms. Computational approaches have enabled rapid advances in neuroscience over the past quarter century – and been key to the recent leap in artificial intelligence (AI). This is a crucial new area in which the Chinese and others are investing mightily. Computational approaches discussed here provide a new path forwards for cross-cultural cognitive research – with implications for big data, social media and AI.

PART III STATE SCALE AND STRATEGIC CULTURES

In Part III, I examine key aspects of Chinese and US strategic thinking—including offense, defense, deterrence, soft power—and apply cross-cultural cognitive insights from Part II.

I ask: ***Does contemporary Chinese strategic thinking differ to that in the US and, if so, in what ways?*** This matters to anticipate misperceptions.

To summarise the following chapters:

I apply a new source of empirical evidence that has extensively and causally examined decision-making: the cross-cultural cognition reviewed in Part II.

These cross-cultural cognitive findings benefit two major areas of global security:

- how deterrence, offense and defense are perceived and represented;
- expectations of how power influences others in the global system.

The cross-cultural ‘cognitive foundations’ at the cognitive level provide specific hypotheses that bridge to decision-making in the global system, which I examine using doctrine, elite opinion and extant scholarship.

Ignoring cross-cultural cognitive differences builds global security on shaky cognitive foundations. Acknowledging this empirical evidence provides parsimonious, unifying cross-cultural cognitive foundations for how different worldviews shape global politics.

Chapter 9 State scale cultures

- 9.1. Chapter 9 introduces Part III of this report, which asks the question: Does contemporary Chinese strategic thinking differ to that in the U.S. and, if so, in what ways?

QUESTION – DOES STRATEGIC CULTURE MATTER?

- 9.2. Does strategic thinking differ between China and the U.S.? Does what is common sense and intuitively plausible really differ between these cultures? Identifying and characterising such differences would help avoid misperception between these cultures.
- 9.3. Many influential voices argue that strategic thought differs between China and the West, rooted in millennia of cultural difference leading to different worldviews. Henry Kissinger wrote in *‘On China’* that ‘No other country can claim so long a continuous civilization, or such an intimate link to its ancient past and classical principles of strategy and statesmanship’, and argued its cultural tradition shaped leaders such as Mao Zedong, Wen Jiabao and Hu Jintao.⁹⁸ Or as the current US State Department senior official Christopher Ford’s 2010 book *‘Mind of Empire’* notes (Ford, 2010, 9, 18),

⁹⁸ (Kissinger, 2011) Quote from p. 2, see also e.g. pp. 3, 103, 490.

'culture and history *do* matter in shaping a country's views of international order, legality and legitimacy' [emphasis in original].

- 9.4. Influential Chinese voices concur. Scholar Wang Jisi noted that 'Chinese policy makers and strategists rely heavily upon cultural heritages as the reservoir of wisdom.'⁹⁹ The authoritative military textbook *The Science of Military Strategy* states that 'The cultural tradition of all nations, especially the national cultural psychology has significance on the process of development of strategic theories.'¹⁰⁰
- 9.5. But it is devilishly difficult to determine if cultural differences affect behaviour, and also the nature of potential differences.
- 9.6. Thus here in Part III of this report I apply a large and largely untapped¹⁰¹ source of empirical data: cross-cultural cognitive science. This provides an extra, independent source of evidence that supports and helps characterise key cross-cultural differences in behaviour and perception. Such support for differences in strategic thought reflects the principle of consilience—where the accordance of two or more inductions from independent sources of evidence converge to strong conclusions—on which much of the natural sciences rest (Wilson, 1999).
- 9.7. I have already systematically reviewed the cross-cultural cognitive literature in Part II, to identify sufficiently robust cognitive findings to apply. This gives hypotheses concerning Chinese and Western thinking about two major areas of international relations:
 - how deterrence, offense and defense are perceived and represented.
 - expectations of how power influences others in the global system.
- 9.8. I examine these against empirical evidence of U.S. and Chinese strategic thinking from key doctrine, secondary sources and elite interviews (e.g. with serving and former PLA officers including from the Central Military Commission). I look for consilience between these two independent sources of cross-cultural empirical evidence. I also test two prominent alternative explanations for differing strategic thinking between polities, based in classic texts, or a balance of power perspective.¹⁰²

ADVANTAGES OF THIS APPROACH

- 9.9. Injecting this fresh empirical data from cross-cultural cognition advances IR theory and practice in several significant ways.

⁹⁹ Quoted in (Ford, 2010), p. 12.

¹⁰⁰ (Peng and Yao, 2005) p. 128.

¹⁰¹ Some work has begun to point in this direction. An experimental study examined the self-reported emotional responses of Chinese and U.S. students to short scenarios, some of which included international interactions, and found potential cross-cultural differences in some of the various experimental manipulations, which have not to our knowledge yet been replicated. (Hays Gries et al., 2011) (Goldgeier and Tetlock, 2001) postulate that a particular theory of human relationships from the early 1990s may apply to constructivist classifications of transnational communities. (Gries and Peng, 2002) illustrated possible cross-cultural influences on events during the 2001 Sino-U.S. interactions after the collision between the U.S. EP-3 reconnaissance plane and a Chinese fighter. (Gismondi, 2015) conducted a statistical study showing that highly 'familistic' cultures emphasising tight-knit family bonds over non-kin associates, as suggested by existing questionnaires, were less wealthy and less effective in military battles over the 20th century. (Adamsky, 2010) Compares how cultural factors, based partly in psychology, related to the impact of new technology. (Vertzberger, 1990) Chapter 5 aimed to postulate possible cultural effects inspired by the more limited empirical cross-cultural work conducted until then.

¹⁰² Examples of scholars citing classic texts are noted above. To test balance of power theory as an explanation for differences regarding deterrence, offense and defense in doctrine between polities I draw on important work that has explicitly examined this: (Posen, 1984)

- 9.10. Firstly, cross-cultural cognition provides an extra, independent source of evidence that supports and helps characterise key cross-cultural differences in behaviour and perception. Such support for differences in strategic thought reflects the principle of consilience—where the accordance of two or more inductions from independent sources of evidence converge to strong conclusions—on which much of the natural sciences rest (Wilson, 1999).
- 9.11. Second, this empirical evidence speaks to critical weaknesses in many extant attempts to identify cognitive foundations for International Relations (IR) (Huddy et al., 2013; McDermott, 2004) in a globalised world. The empirical basis of these cognitive foundations is called into question by two major challenges: the great bulk of psychology work is based on a highly unrepresentative sample of the world's population (e.g. mainly U.S. undergraduates); and the 'replication crisis' whereby only around half of psychology experiments can be replicated even just within the West. It may be fashionable for IR scholars to conduct their own experiments—perhaps even in fascinating unusual samples such as lawmakers—but one must recognise that many such studies would not replicate even in ideal conditions. Robust bodies of evidence with multiple mutually reinforcing methods (as here) may provide more robust foundations, particularly where they accord with empirical evidence of strategic thinking such as doctrine. *All cognitive foundations are not equal.*
- 9.12. Third, the decades-long debate about whether strategic culture matters has reached stalemate – and this new empirical data helps break through the impasse. It provides an extra source of evidence about culture as an *independent variable* affecting behaviour as a *dependent variable*. Such consilient evidence is important because, for example, as scholar Andrew Scobell's study of Chinese strategic culture notes: 'Clear, irrefutable proof of a causal link between strategic culture and deployment of armed force, however, is probably impossible.'¹⁰³ It provides robust cross-cultural cognitive foundations, and also quantitatively captures the broader culture within which strategic culture must be situated.
- 9.13. Fourth, by focussing here on core findings from cross-cultural psychology, this provides a parsimonious and simplifying framework that—without essentialising culture—unifies across multiple potential cultural differences.
- 9.14. Fifth, for policymakers, identifying robust commonalities and differences may help avoid misperception. Do concepts such as deterrence, defense and offense really differ between cultures – and, if so, can the differences be captured by a sufficiently succinct analytic framework to be operationalisable? Cross-cultural cognitive foundations also provide new hypotheses for different types of cultural effects on concepts such as deterrence, offense and defense.
- 9.15. The next chapter discusses the 'strategic culture' debate stalemate and how to advance it.

¹⁰³ (Scobell, 2003) p. 38

Chapter 10 New cognitive foundations to advance the strategic culture stalemate

10.1. This chapter covers three topics:

- The cognitive foundations for Western thinking about international relations are shaky because they ignore two challenges: the cognitive data they rest upon comes from largely Western populations; they often ignore the 'replication crisis.' Part II of this report addresses these challenges.
- Debates about whether we can ever know if strategic culture matters have reached stalemate. Key conceptions of strategic culture include a vital cognitive foundation. Applying new evidence from cross-cultural cognition speaks to the cognitive foundation and allows us to advance the strategic culture debate's stalemate.
- I specify the design to correlate cross-cultural cognitive foundations with US and Chinese strategic thinking. I use three sources of empirical evidence about Chinese and US strategic thinking: doctrine; existing scholarship; and elite interviews (e.g. current and former Peoples' Liberation Army officers, including from the Central Military Commission, and leading scholars);

10.2. I discuss each topic in turn.

SHAKY COGNITIVE FOUNDATIONS FOR INTERNATIONAL RELATIONS: INJECTING FRESH EMPIRICAL DATA

10.3. A large and growing body of Western international relations scholarship explicitly applies concepts from psychology and, latterly, neuroscience to IR and security studies.¹⁰⁴ Ideas about human nature also provide foundations for other IR schools, such as strands of realism.¹⁰⁵ However, two major challenges identified within psychology and neuroscience call into question the empirical basis of such cognitive foundations.

10.4. First, the great bulk of psychology research is based on a highly unrepresentative sample of the world's population who are WEIRD (Western, Educated, Industrialised, Rich and Democratic) (Henrich et al., 2010). Indeed, much of this work arises from the U.S. that comprises only 5% of the world's population, and even then the work usually involves undergraduates. This matters because a wealth of data shows marked differences in basic aspects of cognition between cultures. The extent of this cross-cultural psychology and neuroscience work is indicated by the numerous textbooks¹⁰⁶ and some very highly cited papers, for example with over 22,800 citations.¹⁰⁷ This is not to argue there are not significant commonalities across cultures, or that all members of one culture think alike. However, importantly for IR, differences have been shown in basic aspects of cognition on which IR scholars have specifically drawn, such as how decision-makers pay attention to information (Yarhi-

¹⁰⁴ E.g. (McDermott, 2004) (Jervis, 1976)

¹⁰⁵ (Donnelly, 2000) Ch. 1

¹⁰⁶ Examples include: (Berry et al., 2011; Bond, 2010; Heine, 2015; Kitayama and Cohen, 2007) (Chiao et al., 2015)

¹⁰⁷ (Markus and Kitayama, 1991) had 22,816 citations on Google scholar, September 2019.

Milo, 2013), confidence (Johnson and Tierney, 2011), memory or phenomena related to the fundamental attribution error.

- 10.5. A second challenge to using cognitive science in IR is the ‘replication crisis’, in which findings in around half of experiments cannot be replicated even in well controlled laboratory settings (Collaboration, 2015). Not peculiar to psychology, it is seen across scientific fields, such as in cancer biology or economics. One cannot simply rely on highly cited studies or assume findings replicate even within cultures, let alone between them. However fashionable it may be for IR scholars to conduct their own experiments, it must be recognised that many will not replicate. Thus, IR scholarship seeking to ground itself in ideas from cognitive science should, where possible, use robust cognitive regularities shown across multiple experiments, designs and situations – and look for convergent evidence from multiple cognitive science methods.
- 10.6. These challenges present an important general lesson for IR scholarship that seeks robust and generalizable cognitive foundations in a diverse, globalised world. For instance, one should take considerable care when extrapolating to Sino-U.S. interactions—which are inherently cross-cultural—from ideas grounded in largely Western psychological data and examined by IR scholars using intra-European decision-making before World War One. I address both challenges here by focussing on key cross-cultural findings and systematically the body of experiments on which they rest.

Cross-cultural cognitive foundations: Culture as an independent variable and behaviour as dependent variable

- 10.7. However, the wealth of empirical cross-cultural cognitive data is not just a negative for IR scholars – there is a valuable silver lining to this cloud. This empirical evidence also robustly characterises how different cultures’ worldviews differ in terms of thought, perception and action: where culture is the *independent variable* and behaviour or perception the *dependent variable*. This provides robust cross-cultural cognitive foundations for cross-cultural comparisons in IR. Before continuing, however, it is important to state that one must be highly sceptical about essentialising or reifying culture, which can easily descend into impressionistic racist or ethnic stereotyping. This is not the case with the vast bulk of cross-cultural cognitive science, which instead provides tightly specified comparisons of numerous aspects of perception or behaviour between cultures. Next I describe a parallel literature that has also explored culture.

ADVANCING THE STRATEGIC CULTURE STALEMATE: CONSILIENCE

- 10.8. In parallel with cross-cultural psychology’s blossoming over the past four decades, an extensive IR literature on culture’s role in national security decision-making also developed (Sondhaus, 2006, 1). This began with Ken Booth’s (Booth, 1979) and Jack Snyder’s seminal works. Snyder’s coined the term ‘strategic culture’, which he defined as ‘the sum total of ideas, conditioned emotional responses, and patterns of habitual behaviour that members of a national strategic community have acquired through instruction or imitation.’ (Snyder, 1977, 8)

- 10.9. Psychology figured in a number of key contributions, where basic psychological explanations were applied to illuminate elite decisions. These did not, however, draw on cross-cultural psychology. For example, Booth's discussion of the concept of culture describes 'cultural thoughtways' and how 'those fighting units called nation-states are identifiable socio-psychologically, as well as politically.'¹⁰⁸ Writing before much modern cross-cultural psychology, Booth noted that while 'It is probably true that we still do not know enough about national character to know whether it exists or not. [He assumes] one can reasonably talk about probabilities and tendencies [and that] 'certain qualities of intellect and character occur more frequently and are more highly valued in one nation than another'.¹⁰⁹ In another example, Alastair Iain Johnston's seminal work on Chinese strategic culture appeals in part to psychological explanation¹¹⁰ and his later book expanding on the topic was explicitly based on social psychological microprocesses (Johnston, 2007).
- 10.10. However, despite much valuable scholarship, heated debates raged about culture, most notably about a key question: can one separate culture and behaviour, and so falsifiably test potential effects of culture as an *independent variable* on behaviour as a *dependent variable*? This debate followed Johnston's mid-1990s work that argued most earlier work on strategic culture had defined it too broadly to be falsifiable, and so he sought to omit behaviour from the independent variable (Johnston, 1995). In the ensuing debate, Colin Gray in particular pushed back, for example arguing that culture and behaviour cannot be detached because culture, by definition, includes both (Gray, 1999). By the new millennium this key debate had reached stalemate, as illustrated by later scholars who acknowledged Johnston's contribution but noted, for example, that 'culture does not act independently'¹¹¹ and that 'Clear, irrefutable proof of a causal link ... is probably impossible.'¹¹² So, how to advance this stalemate and provide empirical evidence that culture matters?
- 10.11. Injecting empirical data from cross-cultural psychology provides an extra, independent source of evidence for consistent differences in *behaviour* between cultures, where culture is the *independent variable* and behaviour the *dependent variable*. That this is an extra, independent source of evidence is valuable because it enables *consilience*—the principle whereby independent sources of evidence converge to strong conclusions—between these cross-cultural cognitive foundations and cross-cultural strategic thinking. This can be put another way. Clearly psychological phenomena at the level of individuals cannot fully explain phenomena at the strategic level. However, where the phenomenon at the psychological level (i.e. here relating to particular cross-cultural differences in decision-making) *covaries* with similar phenomena at the state level (i.e. here similar cross-cultural differences in strategic thinking) then this provides an additional source of evidence for the strategic-level phenomenon – i.e. here it provides supportive evidence that culture matters. Such covariation between cross-cultural differences at the human cognitive and state levels may occur because culture as the independent variable separately drives decision-making at each level as a separate dependent variable; or because

¹⁰⁸ (Booth, 1979) p. 14. See also e.g. pp. 101, 130, 146-7.

¹⁰⁹ (Booth, 1979) p. 16

¹¹⁰ (Johnston, 1995) E.g. pp. 156-7, 164, 174.

¹¹¹ Forrest E. Morgan, *Compellence and the Strategic Culture of Imperial Japan* (Westport, Conn: Praeger, 2003). pp. 8-9

¹¹² (Scobell, 2003) p. 38

the cultures' psychological tendencies or worldviews shape the 'common sense' that helps constitute strategic culture. Either way definitive proof is likely impossible, not least because multiple interacting factors will always shape strategic thinking, but showing covariance provides additional evidence that culture matters at the strategic level.

10.12. Further reasons argue that this empirical evidence about individuals' psychology can provide supportive evidence for elite decision-making at the strategic-level, including:

- Firstly, considerable work has fruitfully linked individual cognition within cultures (e.g. that individuals display 'cognitive consistency') and strategic thought.¹¹³
- Secondly, important work has explicitly grounded Chinese strategic culture in social psychological microprocesses¹¹⁴, although without applying cross-cultural cognitive foundations. Indeed the importance of psychological dimensions in strategic culture is explicit or implicit in many key contributions as described above.
- Thirdly, constructivism is deeply concerned with culture and recent work used psychological cognitive foundations to inform constructivist perspectives on national security decisions¹¹⁵, although again without yet applying cross-cultural cognitive foundations.
- Fourth, leaders and those writing doctrine must communicate with stories, narratives and perspectives that resonate in their culture.
- Fifth, scholars studying culture in national security decision-making have stressed that understanding strategic culture cannot be divorced from understanding the broader culture in which it is situated – on which our data throws crucial new empirical light.¹¹⁶ Characterising the broader culture is hugely challenging: hence the significance of the tractable and replicable new data provided by cognitive science.

10.13. Before continuing, I must stress that I do not attempt to reduce culture to individuals' psychology. Culture and individual psychology are mutually constituted, such that the psychological tendencies or worldviews of individuals within a culture help constitute that culture, along with many other intersubjective factors such as artefacts or social structures.

Alternative explanations for differences in strategic thinking between polities

10.14. Finally, when examining sources of variation in strategic thought between cultures, we must also compare cross-cultural cognitive foundations to established alternative explanations. Here I focus on two.¹¹⁷

10.15. *Classical texts*: Firstly, when considering the strategic thinking of a polity such as China's, numerous influential U.S. and Chinese voices assert the enduring

¹¹³ E.g. (Jervis, 1976)

¹¹⁴ (Johnston, 2007) pp. 95-6 in particular discusses 'The aggregation problem'.

¹¹⁵ (Shannon and Kowert, 2011) pp. 15-17 and multiple contributions discuss different levels of analysis.

¹¹⁶ (Scobell, 2014) p. 215. (Scobell, 2003) p. 3 (Hopf, 2002) Ch. 1

¹¹⁷ Multiple potential sources likely contribute. Future work could, for example, examine the influence of Mao Zedong.

importance of classic cultural texts in shaping modern Chinese strategic thinking.¹¹⁸ Clearly the potential Chinese corpus is vast. Thus, here I draw on the specific Chinese classic texts that have dominated this scholarly work—the *Seven Military Classics* that includes Sun Zi’s *Art of War*, and Confucius—and key scholarship examining them in terms of strategic thought¹¹⁹, particularly as they relate to deterrence, offense and defense examined below. Although for U.S. strategic thinking similarly prominent classic texts are less obvious, for comparison I draw on Thucydides and Clausewitz whose works have greatly influenced strategic thinking, and key scholarship examining them.¹²⁰

- 10.16. *Balance of power theory*: A second alternative explanation is that strategic thinking varies in response to balance of power considerations. For example, when considering military doctrine concerning offense, defense and deterrence—as this report does below—scholar Barry Posen argues that differences reflect different responses to the security threats thrown up by the lawless environment outside the state's borders.¹²¹ Whilst clearly realism is heterogeneous, here I use Posen’s characterisation of ‘balance of power theory’ that includes a ‘focus on how these general constraints and incentives [above] combine with the unique situations of individual states to lead them to specific foreign or military policies.’ In deriving effects of balance of power theory on, for example, deterrence, offense and defense that I examine below, Posen describes specifically how ‘balance of power theory itself suggests that expanding hegemony will be opposed and stopped ... [and that states] devise a military doctrine that preserves their interests at the lowest costs and risks. Thus, an inference from balance of power theory is that military doctrine will be heterogeneous along the dimension of offense-defense-deterrence.’ I describe the specific inferences from such theory along with each aspect of strategic thought examined in detail below.
- 10.17. Thus, here we can compare three potential ways to explain differences in strategic thinking between polities such as the U.S. and China:
- cross-cultural cognitive foundations;
 - explanations based in classic texts;
 - and balance of power theory.

DESIGN TO CORRELATE CROSS-CULTURAL COGNITIVE FOUNDATIONS AND STRATEGIC THINKING

- 10.18. Next I describe methods to identify robust cross-cultural cognitive foundations, and to characterize aspects of US and Chinese strategic thinking.

Cross-cultural cognitive science: What do we know robustly?

- 10.19. As Part II of this report describes, I systematically evaluated the cross-cultural cognitive literature. I focus here on two findings:

¹¹⁸ E.g. (Kissinger, 2011) (Ford, 2010) See chapter 7 for examples.

¹¹⁹ E.g. (Johnston, 1995; Kierman and Fairbank, 1974; Scobell, 2003)

¹²⁰ E.g. (Lebow, 2007) (Kagan and Viggiano, 2013)

¹²¹ (Posen, 1984) pp. 34-5, 68-9, 69-74 and 78-9.

- *Context-dependence*: I identified 56 experiments, which provided moderately robust evidence supporting cultural differences
- *Social influence leading to conformity*: I identified 32 studies, low to moderately robust evidence for cultural differences.

Empirical evidence on Chinese and U.S. strategic thinking

- 10.20. I examine the strategic thought of the People's Republic of China (PRC) and the U.S.. I focus on the PRC for three reasons. First, of the three larger East Asian countries to which the empirical psychological findings largely relate—the PRC, Japan and the South Korea—the PRC's strategic thought has undergone by far the richest analysis. Second, amongst these actors the PRC's strategic thought did not undergo the intimate post-war U.S. security cooperation with South Korea and Japan. Japan's post-War constitution also constrained its strategic culture. Third, the PRC is the most consequential of these actors going forward. The U.S. was chosen as the most consequential Western actor interacting with East Asia, with extensive literature on its strategic thinking and it is by far the dominant Western point of comparison in the psychological literature.
- 10.21. The specific aspects of strategic thought examined here were chosen due to their centrality to IR theory and policy; and because good evidence exists to evaluate them. Both Hypotheses 1 and 2 below relate to a key dimension of doctrine identified by scholar Barry Posen (Posen, 1984)—deterrence, offense and defense—for which we can draw in particular on Chinese and U.S. doctrine.
- 10.22. I use three sources of empirical evidence on Chinese strategic thinking and its comparison to the U.S.. I identified coherent U.S. and Chinese accounts across these mutually validating sources.
- First are military doctrine and statements. Doctrine is a broad term, but essentially outlines how a state plans to employ military means to achieve its political goals. I examine specific U.S. and Chinese texts. Chinese doctrine is less readily available, but can be 'found in a variety of regulations and official documents, including teaching material used in its military education institutes.'¹²² I particularly use three key Chinese documents. *The Science of Military Strategy*¹²³ was published in English by the Academy of Military Sciences in 2005, translating a 2001 Chinese edition used for military education. Its 500 pages cover many aspects of military strategy, such as a chapter on deterrence. A 2013 Chinese edition has been released. (McReynolds, 2016) *The Science of Second Artillery Campaigns* (Second Artillery, 2004) was a classified 2004 publication in Chinese by the PLA Press for internal use and covers many aspects of strategy relevant to the Peoples' Liberation Army Rocket Force (PLARF; formerly the Second Artillery)¹²⁴, which operates the missile forces whose use or threat of use would crucially figure in any Sino-US escalation scenario. I also

¹²² (Blasko, 2012) p. 255

¹²³ (Peng and Yao, 2005) This work is considered authoritative, although not official doctrine. There is considerable continuity with the 2013 edition in concepts of deterrence and 'active defense' of particular relevance here, as discussed in (McReynolds, 2016)

¹²⁴ The Second Artillery Force was recommissioned as the PLARF on 31st December, 2015.

examined the biennial defense white papers. For the U.S. I focus on the family of Joint Publications¹²⁵, in particular the 'linchpin' JP 3-0; the Deterrent Operations Joint Operating Concept (DO JOC)(DoD, 2006) relating to state and non-state deterrence; and the Joint Operational Access Concept (JOAC)¹²⁶ of particular relevance for near-term China-U.S. escalation scenarios.

- Second, elite interviews were conducted with Chinese IR scholars, including active and former PLA officers, who regularly contribute to policy debates at five leading universities (in Beijing and Shanghai) and three thinktanks (in Beijing and Shanghai). I interviewed western IR scholars of Chinese security, including active and former U.S. officers. I similarly examined U.S. thinking.
- Third, I examined Western scholarly literature on Chinese, and U.S., strategic culture and national security decision-making.

10.23. Before continuing, I note three points about the scope of such evidence about strategic thought.

- Firstly, doctrine and other writing from the strategic communities provide one important source of information.¹²⁷ This is particularly so for China, whose last military conflict was some four decades ago in the 1979 Vietnam invasion. Broader Chinese strategic community debates may also be increasingly informative as social networks, including think tanks and universities, may increasingly impact on Chinese foreign policy debates.¹²⁸ However, doctrine and other writing—here also augmented with interviews—clearly provide only one source on future U.S. and Chinese decision-making.
- Second, such sources could be usefully augmented in future work systematically testing the proposed cross-cultural cognitive foundations against historical U.S. and Chinese cases – another partial source of evidence on future decision-making.
- Thirdly, such sources focus on military and technical dimensions that shape the range of options in confrontations, but that provide only one—albeit important—input into the civil-military decision process.

10.24. In sum, the present study presents an important first cut on which a future program can build as Chapter 13 discusses.

¹²⁵ I examined all publicly downloadable documents (May 2017), focussing on those noted above and the Joint Concept on Human Aspects of Military Operations (JC HAMO), JC Integrated Campaigning (JC IC), and JC Operations in the Information Environment (JCOIE).

¹²⁶ (U.S. Department of Defense, 2012) It reflects responses to 'anti-access area denial.'

¹²⁷ See e.g. (McReynolds, 2016) James C. Mulvenon and David Michael Finkelstein, Eds. *China's Revolution in Doctrinal Affairs* (CNA Corporation, 2005).

¹²⁸ Bonnie S. Glaser and Evan S. Medeiros, "The Changing Ecology of Foreign Policy-Making in China" *The China Quarterly* 190 (2007): 291–310.

Chapter 11 Context-dependence and Chinese thought on deterrence, offense and defense

- 11.1. Here the cross-cultural cognitive finding from Part II is greater context dependence, and I examine how this ‘cultural thoughtway’ may shape two key aspects of offense, defense and deterrence.
- 11.2. Finding (1) Chinese accounts of deterrence are more context-dependent, and so they view events and actions more within the context of surrounding events and actions than do US accounts. In more context-dependent Chinese accounts:
 - (1a) even first strikes or preemptive actions can be rendered as deterrent actions against an adversary when seen within the broader context of deterrence operations against that adversary.
 - (1b) coercive actions are viewed more holistically within the context of repeated interactions, rendering little meaningful difference between deterrent and compelling threats.
 - (1c) the activities and goals of deterrence and warfighting are more holistically integrated than U.S. accounts
- 11.3. Finding (2) Chinese views of offense and defense are more context-dependent. ‘Active defense’ has formed a primary strategic idea and guiding principle from 1949 to the present – and its essence is holistic integration of offense and defense.
 - (2a) Chinese holistic integration of offense and defense
 - (2b) Chinese first-strikes and pre-emption in the context of defense in Chinese accounts, perceptions of actions as offensive or defensive will be more strongly influenced by the context of offense or defense with that adversary in which they occur.
- 11.4. Finally, this chapter discusses context-dependence more broadly in Chinese strategic thinking.

INTRODUCTION

- 11.5. The cross-cultural cognitive finding explored in this chapter is that: *Westerners tend to engage in more context-independent cognitive processes by focusing on a salient object independently of its context, whereas East Asians tend to engage in more context-dependent or holistic cognitive processes by attending to the relationship between the object and the context in which it is located.* Chapter 7 discusses this in more detail.
- 11.6. This is also referred to as holistic versus analytic or field-dependent versus field-independent cognition. Context is the setting or background of events or objects within which the focal object is located – and here culture is the independent variable that affects the degree to which context influences, for example, perception and action. These cultural effects are seen across diverse cognitive domains, such as perception, attention, memory and action.
- 11.7. For clarity, I do not mean one group is purely context-independent and the other purely context-independent—all humans need to see the wood and the trees—but instead this reflects a robust and reliable tendency seen between cultures.

- 11.8. This empirical finding from cross-cultural cognition provides specific hypotheses for differences in U.S. and Chinese thinking on a key dimension of doctrine (Posen, 1984): namely deterrence, defense and offense. I examine two areas below in turn:
- Hypothesis 1 in Chinese accounts perceptions of events and actions depend more on their deterrent, defensive or offensive *context*;
 - Hypothesis 2 in Chinese accounts the categories of offense, defense or deterrence are themselves be understood more holistically together.

HYPOTHESIS 1: MORE CONTEXT-DEPENDENT CHINESE THINKING ON DETERRENCE

- 11.9. *Hypothesis 1. Chinese accounts of deterrence are more context-dependent, whereby events and actions are viewed more within the context of surrounding events and actions than in U.S. accounts.*
- 11.10. Testing this Hypothesis 1 provides a new perspective for how strategic culture may affect deterrence. It parsimoniously explains cultural differences across three core features of deterrence (1a, 1b, and 1c below).

Hypothesis 1a: Chinese pre-emption in the context of deterrence

- 11.11. Firstly, it sheds new light on the potential for different Chinese and U.S. perceptions about the intention and meaning of first strikes or preemptive actions. In more context-dependent Chinese accounts, even preemptive actions may be perceived as part of deterrence against an adversary when seen in the context of deterrence operations against that adversary (Hypothesis 1a). This may cause significant misperception: a preemptive act understood from within a context-dependent perspective as being heavily influenced by its context to comprise part of a deterrent strategy, would instead be perceived very differently by a context-independent culture that views the act shorn of context.
- 11.12. That is, *Hypothesis 1a suggests that in more context-dependent Chinese accounts, even first strikes or preemptive actions can be rendered as deterrent actions against an adversary when seen within the broader context of deterrence operations against that adversary, whilst instead U.S. accounts will view them more independently of such context as still categorically distinct.*
- 11.13. That Chinese accounts can render pre-emptive actions or first strikes part of deterrence, when carried out in the context of a broader deterrent strategy, is supported by multiple sources of evidence. Chinese doctrine and writing supports such a view. In terms of doctrine, the *Science of Military Strategy* states at the beginning of its chapter on deterrence that ‘the objective of strategic deterrence is to contain the outbreak of war or to limit the scope and the escalation of war, with a view to curbing the war, and its strategic objective is attained by non-fighting means or fighting a small war.’¹²⁹ In *National Defense Theory (guofang lilun)*, the second of a PLA-published series of volumes used as national defense teaching materials, strategic deterrence is seen as the adroit application of military strength, involving

¹²⁹ (Peng and Yao, 2005) p. 213

actual use or nonuse.¹³⁰ Other assessments of Chinese doctrine concur¹³¹, for example with one recent analysis of Chinese writing on escalation noting that deterrence can involve pre-emption and kinetic actions¹³², and another that ‘Even within the context of the active defense precept of “striking only after being struck,” PLA strategists believe it may be necessary to “dare to use war to stop war” or fight a small battle to deter a large war.’¹³³ Chinese author Liu Xiaoli writes of potentially firing shots to damage ships while the Chinese impose blockades¹³⁴ and others discuss deterrence through ‘limited operational actions,’¹³⁵ which might include ‘military blockade’ and ‘military attack.’¹³⁶ Many, although not all, Chinese interviewees concurred with the overall characterisation of pre-emption in deterrence described here, particularly those with stronger policy than academic links.¹³⁷

- 11.14. Analyses of historical cases also support such a view. In the 1969 Sino-Soviet border conflict the Chinese fired the first shots in their attack on Soviet forces, which occurred after a series of diplomatic and political interactions. When considering this first strike or preemptive attack, Michael Gerson¹³⁸ concludes that ‘available evidence and scholarship suggests that Mao’s primary objective was to deter future Soviet aggression or coercion against China. ... By initiating a limited attack ... and killing a few Soviets, China sought to deter future provocations by ... making clear that any attack will be forcefully resisted by a fearless adversary.’ As he notes, a contemporary CIA assessment described the Chinese attack as ‘a distinctly Maoist method of deterrence.’
- 11.15. In contrast, U.S. accounts perceive preemptive actions against an adversary more independently of a context of deterrence against that adversary. This can be illustrated by debates surrounding partial U.S. doctrinal moves from deterrence to preemption in the early 2000s that rests on the key distinction between the two. As scholar Jeffrey Knopf noted in reviewing this ‘Fourth Wave’ of deterrence thinking,¹³⁹ ‘The basic fault line involves whether or not to reduce reliance on deterrence in favour of a strategy that gives a greater role to active defences and offensive operations.’ Reviewing these Western policy and scholarly debates, Lawrence Freedman’s chapter entitled ‘From Deterrence to Pre-Emption’ similarly notes the distinction between the concepts, for example writing that ‘As far as the United States was concerned ... [events] suggested that deterrence was no longer relevant as a strategy. Instead, ‘pre-emption’ was offered as a more appropriate alternative.’¹⁴⁰ Furthermore, one can distinguish Chinese thinking on pre-emption within crises against a specific adversary to deter them, from the more general effects on third parties that some in the U.S. argue preemptive actions may cause. Neither is the

¹³⁰ (Cheng, 2011) p. 93

¹³¹ E.g. (Blasko, 2012) pp. 123-4

¹³² (Kaufman and Hartnett, 2016) pp. 53-57, 81-2.

¹³³ Dennis J. Blasko, “China’s evolving approach to strategic deterrence” in (McReynolds, 2016) p. 287

¹³⁴ Liu Xiaoli, *Military Response to Significant Sudden Incidents and Crises*, p. 205. Quoted in (Kaufman and Hartnett, 2016) p. 56

¹³⁵ Zhang Tuosheng, “A Study of China’s Behaviors in International Military Security Crises,” p. 117. Quoted in (Kaufman and Hartnett, 2016) p. 55

¹³⁶ Lin Yi, “Historical Review of Studies of Military Crisis Management in China and Foreign Countries,” p. 18. Quoted in (Kaufman and Hartnett, 2016) p. 55

¹³⁷ Interviews by the author in Beijing and Shanghai 2014 and 2017.

¹³⁸ (Gerson, 2010) p. 24

¹³⁹ (Knopf, 2010) p. 6

¹⁴⁰ (Freedman, 2004) pp. 84-85

Chinese thinking the same as 'generalised deterrence' articulated by leading Western scholars like Patrick Morgan who coined the term in distinction to 'immediate deterrence' against an adversary. Instead, such 'generalised deterrence' relates to opponents who maintain armed forces to regulate their relationship even though neither is anywhere near mounting an attack, involving vague, relaxed threats and relates more to the balance of power.¹⁴¹

Hypothesis 1a. Summary and alternative explanations

- 11.16. In summary, evidence supports this *Hypothesis 1a* based in context dependent and independent cross-cultural cognitive foundations. But could this difference be equally well explained by two alternative explanations based in classic texts or balance of power theory? With respect to the classic texts, deterrence features in both Chinese works such as the *Seven Military Classics*¹⁴² and Western works, such as by Thucydides.¹⁴³ However, no clear pattern emerges more prominently for the use of pre-emption as part of deterrence in analyses of Chinese than Western classics. Analyses of Chinese strategic culture grounded in classic texts do not notably stress pre-emption as part of coercion.¹⁴⁴ Indeed, one can point to evidence predicting the reverse of the pattern described above. For instance, analyses of the Western tradition describe how Thucydides may have considered pre-emption as part of more generalised deterrence when he wrote: 'People who ... are tempted ... to attack their neighbours, usually march most confidently against those who keep still ... but think twice before they grapple with those who meet them outside their frontier and strike the first blow if opportunity offers.'¹⁴⁵
- 11.17. Balance of power theory suggests that Chinese military inferiority may provide greater incentive to strike first in order to reduce a superior adversary's material advantage in arms.¹⁴⁶ However, that does not explain why conducting preemptive actions or first strikes would be considered part of deterrence. In the 1969 Sino-Soviet border conflict, for example, whilst the Chinese action caused fatalities and had a large signalling impact, consistent with it being in the context of a deterrent strategy against the USSR, it was not large enough to remove Soviet capabilities such that the USSR lost either local or broader military superiority. Indeed it led to increased Russian local capabilities, a larger border firefight two weeks later—likely Soviet initiated—and aggressive new Soviet nuclear coercion. (Gerson, 2010)

Hypothesis 1b: Context-dependence renders deterrence and compellence the same

- 11.18. Secondly, while a more context-independent U.S. view of coercive episodes renders a meaningful distinction (Schelling, 1966) between deterrence (that aims to dissuade

¹⁴¹ (Freedman, 2004) p. 40

¹⁴² (Johnston, 1995) E.g. pp. 83, 122, 131-2

¹⁴³ (Lebow, 2007) p. 167

¹⁴⁴ (Scobell, 2002) pp. v, 3-5; (Johnston, 1995) pp. 68-73

¹⁴⁵ Vitor David Harrison in (Kagan and Viggiano, 2013) p. 263

¹⁴⁶ (Posen, 1984) pp. 78-9 for example notes that status quo states may instead prefer defensive doctrines. Also relevant to the U.S. now, however, he also notes that states with a favourable power position suffering erosion may prefer offensive doctrines.

an adversary from acting) and compellence (that aims to coerce them to act), in contrast a more context-dependent Chinese view would find little meaningful distinction (*Hypothesis 1b*). In the context of repeated interactions, what constitutes a status quo from which to judge each actor's actions as compellent or deterrent? For example in the 1950s the U.S. issued what they understood to be deterrent threats to the Chinese over Taiwan, but in the context of ongoing Chinese activities and claims towards unification these may be considered compellent.¹⁴⁷ This cultural difference may cause misperception. When making actions, the Chinese 'deterrent' toolkit will include the more 'compellent' tools (e.g. more forceful naval and paramilitary activities in the South China and East China seas, or blockade in a Taiwan contingency) that to U.S. observers would fall outside their narrower understanding of deterrence. U.S. deterrent threats framed in U.S. terms as a deterrent action may instead be more readily perceived from within the broader Chinese concept as little different to more offensive compellent activities, particularly when coupled with worst case interpretations of others' actions.

- 11.19. Put another way, a second way that greater context-dependence may affect thinking on deterrence is reflected in *Hypothesis 1b that Chinese accounts will view coercive actions more holistically within the context of repeated interactions, rendering little meaningful difference between deterrent and compellent threats*. In contrast, U.S. accounts will be expected to view deterrent and compellent threats in a more context-independent way as discrete episodes, which clearly distinguishes them as originally described by Thomas Schelling (Schelling, 1960).
- 11.20. In U.S. thinking, numerous influential scholars predict adversaries will respond differently to the two main types of threats in the literature on coercion—deterrent threats that demand an adversary inhibits an action, and compellent threats that demand an adversary makes an action—which are thought to have different explanations with clear policy implications.¹⁴⁸ Western doctrine on coercion relates to the Western idea of deterrence rather than compellence, as shown in the *Deterrence Operations Joint Operating Concept*¹⁴⁹ and across numerous official documents.¹⁵⁰
- 11.21. In contrast, multiple sources of evidence suggest Chinese thinking incorporates both types of episode. Most Chinese interviewees concurred.¹⁵¹ In Chinese doctrine, the *Science of Military Strategy* states that 'deterrence plays two basic roles: one is to dissuade the opponent from doing something through deterrence, the other is to persuade the opponent what ought to be done through deterrence, and both demand the opponent to submit to the deterrer's volition.'¹⁵² The PLA *Encyclopedia*, defines a strategy of deterrence, or *weishe zhanlue*, as 'the display of military power, or the threat of use of military power, in order to compel an opponent to submit.'¹⁵³ One recent review of Chinese doctrine that directly compared U.S. and Chinese thinking on deterrence and compellence noted that 'the Chinese definition and theory of

¹⁴⁷ (Lebow and Stein, 1990) p. 354

¹⁴⁸ E.g. Barry R. Posen, "Military Responses to Refugee Disasters," *International Security* 21, no. 1 (1996): 72–111; Robert J. Art, "Coercive Diplomacy: What Do We Know?," in *The United States and Coercive Diplomacy*, ed. Robert J Art and Patrick M Cronin (Washington, D.C.: USIP Press, 2003).

¹⁴⁹ (DoD, 2006) pp. 1-4

¹⁵⁰ E.g. (Knopf, 2008) p. 233 Reviewing 22 documents from 2001-2008 only one involved compellence.

¹⁵¹ Interviews and discussions, Beijing and Shanghai 2014 and 2017.

¹⁵² Peng and Yao, *The Science of Military Strategy*. p. 215

¹⁵³ PLA Encyclopedia Committee, *Chinese Military Encyclopedia*, Supplemental Volume (Beijing: Military Science Publishing House, 2002), p. 477 in (Cheng, 2011) p. 92

deterrence accounts for *both outcomes*, either preventing or undoing action through the threat or use of force.’ [italics in original]¹⁵⁴ Another U.S. scholar notes that the Western distinction ‘is in sharp contrast with the term *weishe*, which embodies *both* deterrence *and* compellence.’, which he identifies in sources such as a volume by the PLA National Defense University’s Military Science Research Department as well as in the PLA-published volume *National Defense Theory (guofang lilun)*.¹⁵⁵ The Chinese scholar Li Bin also concurs in a series of papers directly comparing Chinese and U.S. thinking on deterrence and emphasizing the role of context, writing that:¹⁵⁶

‘Chinese scholars take the position that various issues in a conflict are interrelated ... Therefore, in their view, nuclear deterrence and compellence are often indistinguishable. In fact, Chinese scholars often do not make a deliberate distinction between the two, so when Chinese scholars use the term “nuclear deterrence,” it includes the idea of nuclear compellence, which makes their use of the term “nuclear deterrence” equivalent to the term “nuclear coercion” as it is used by U.S. scholars. Chinese scholars frequently criticize nuclear deterrence; but when they do so, they are in fact criticizing the compellence element of nuclear coercion. ... This understanding of deterrence and compellence explains the Chinese government’s criticism, in its 1995 white paper on nuclear disarmament, of “nuclear deterrence based on the first use of nuclear weapons.”’

Hypothesis 1b. Summary and alternative explanations

11.22. Thus, evidence supports this second implication of a more context-dependent framework for Chinese thinking on deterrence. This is not clearly predicted by cross-cultural differences in the classic texts’ treatment of coercion. Analyses note that Chinese strategic classics¹⁵⁷ describe coercive diplomacy, and in the Western classics for example Thucydides contains instances of deterrence and compellence.¹⁵⁸ However, for neither tradition is it noted that a clear distinction is discussed. Balance of power theory does not generate clear predictions for why Chinese accounts would consider deterrence and compellence so holistically compared to the U.S.. It is unclear, for example, why differences in relative power would make one more or less likely to consider episodes within the context of repeated interactions. Also, for instance, if the analytic distinction is useful then balance of power theory provides no obvious reason why Chinese should deny themselves a useful analytic tool.¹⁵⁹

Hypothesis 1c: Chinese holistic integration of deterrence and warfighting

¹⁵⁴ Blasko, “China’s evolving approach to strategic deterrence” p. 285.

¹⁵⁵ (Cheng, 2011) p. 92

¹⁵⁶ Li Bin, “Introduction”, in Li Bin and Tong Zhao Eds. *Understanding Chinese Nuclear Thinking* (Carnegie Endowment for International Peace, 2016). pp. 9-10.

¹⁵⁷ E.g. (Johnston, 1995) pp. 83, 131-2, 122

¹⁵⁸ E.g. (Lebow, 2007) p. 167

¹⁵⁹ Equally, if the distinction isn’t useful, which may be the case, balance of power theory doesn’t explain why it shapes aspects of U.S. thinking

- 11.23. Thirdly, a more context-dependent and holistic Chinese worldview also makes new predictions for cultural differences in the relationship between deterrence and warfighting. Whilst during the Cold War considerable thought was given to the relative balance of warfighting and deterrent components of Soviet policy¹⁶⁰, instead here the hypothesis from cross-cultural psychology is that Chinese accounts view deterrence and warfighting together more holistically than U.S. accounts (*Hypothesis 1c*). It is not just that planning or thinking about strategy in general may involve warfighting and deterrence, it is that in more holistic Chinese accounts they are more intimately connected and can be understood only by reference to the whole strategy of which they are both a part. Chinese accounts, which conceive of warfighting in the context of deterrence and deterrence in the context of warfighting, may be interpreted with alarm in the West as a predilection for warfighting as opposed to deterrence.
- 11.24. A third implication of a more context-dependent views of deterrence is *that Chinese accounts will view the activities and goals of deterrence and warfighting together more holistically than U.S. accounts (Hypothesis 1c)*.
- 11.25. Importantly, this does not relate to the inherent observation in deterrence, shared by Chinese¹⁶¹ and U.S.¹⁶² accounts, that military strength (i.e. capability) is a necessary element of deterrence alongside resolve and their communication. Instead this relates to the degree to which there is holistic integration of the activities and goals of deterrence and warfighting.
- 11.26. Chinese thinking on the integrated holistic nature of the activities and goals of deterrence and warfighting is highly prominent throughout Chinese doctrine and strategic thought.¹⁶³ The 2015 Defense White Paper states that ‘A holistic approach will be taken to balance war preparation and war prevention, rights protection and stability maintenance, deterrence and warfighting, and operations in wartime and employment of military forces in peacetime.’¹⁶⁴ The *Science of Military Strategy* states prominently in its chapter on deterrence that ‘Strategic deterrence and strategic operations are dialectically unified.’¹⁶⁵ It describes the holistic integration of the activities and goals of deterrence and warfighting, where both warfighting and deterrence ‘are interacted, and their objectives are for attaining one’s strategic objectives by frustrating the enemy’s attempts.’ Further, ‘as a form of struggle in the military field’ deterrence can be offensive or defensive, and ‘both of them aim at obeying and serving the military strategy of the state.’¹⁶⁶ It also stresses the integration of warfighting and deterrence in the context of unfolding episodes over time in two ways. One is that a principle of deterrence is ‘Keeping the foothold on warfighting’ to anticipate ‘the situation of war escalation ... and victory can be won by fighting’.¹⁶⁷ Another principle is that¹⁶⁸:
- 11.27. ‘What strategic deterrence values most is to seek the “momentum” ... [which can involve] “creating momentum by military preparation”, demonstrating momentum by

¹⁶⁰ (Freedman, 2003) pp. 254-7

¹⁶¹ (Peng and Yao, 2005) p. 18, pp. 213-15

¹⁶² E.g. JP 3-0 p. xxii

¹⁶³ Interviews 2014 and 2016.

¹⁶⁴ State Council Information Office of the PRC, China’s Military Strategy, May 2015, Beijing. http://english.gov.cn/archive/white_paper/2015/05/27/content_281475115610833.htm

¹⁶⁵ (Peng and Yao, 2005) p. 213

¹⁶⁶ (Peng and Yao, 2005) p. 216

¹⁶⁷ (Peng and Yao, 2005) p. 228

¹⁶⁸ (Peng and Yao, 2005) pp. 222-3

showing the disposition of strength to the enemy” and “augmenting momentum by military strike” ... [in which] ‘This form of deterrence possesses dual purpose of deterrence and warfighting.’

- 11.28. The *Science of Second Artillery Campaigns* also emphasises the holistic integration of deterrence and what it terms conventional missile strike campaigns in three chapters that all discuss deterrence.¹⁶⁹ The chapter on “*Guiding Ideologies and Principles of Second Artillery Campaigns*” discusses the integration of deterrence and conventional campaigns, stating that¹⁷⁰ ‘the guiding ideology of Second Artillery campaigns is “integrated deterrence and warfare and focused strikes” [“shezhan jiehe, zhongdian daji”, 摄战结合，重点打击].’ and continues that “Integrated deterrence and warfare’ means that when preparing and executing Second Artillery campaigns, campaign deterrence activities and the realities of missile strike operations must be organically integrated to form overall operational capabilities.’ It notes that a key development in warfare is that ‘the “holistic nature” [“zhengtixing”, 整体性] of campaign activities has grown stronger.’¹⁷¹ It later states that ‘Only when deterrence and real warfare constitute an organic whole can successful campaign deterrence activities achieve the greatest effect.’¹⁷²
- 11.29. In comparison, U.S. doctrine much less fulsomely stresses the holistic integration of the activities of warfighting and deterrence and treats them relatively independently. This is seen across three key doctrinal documents. The ‘linchpin’ *JP 3-0 Joint Operations* treats them relatively independently. It divides ‘The range of military operations is into three primary categories: military engagement, security cooperation, and deterrence; crisis response and limited contingency operations; and large-scale combat operations.’¹⁷³ Further, the category of ‘large-scale combat operations’ is divided into phases (where ‘a phase is a definitive stage or period’¹⁷⁴) in which the ‘The deter phase is characterized by preparatory actions that indicate resolve to commit resources and respond to the situation.’¹⁷⁵ The *DO JOC* addresses the relationship of warfighting and deterrence during its discussion of how to implement its ‘central idea’, it states that ‘it is possible to identify key joint capabilities (and deterrence-related attributes of those capabilities) that must be planned for regardless of their warfighting utility.’¹⁷⁶ The *JOAC* again features the idea of providing capabilities in deterrence¹⁷⁷, rather than that the activities or goals of deterrence and warfighting are holistically integrated.

Hypothesis 1c. Summary and alternative explanations

¹⁶⁹ (Second Artillery, 2004) These chapters are: ‘*Guiding Ideologies and Principles of Second Artillery Campaigns*’ ‘*Second Artillery Campaign Deterrence*’; and ‘*Second Artillery Conventional Missile Strike Campaign*’.

¹⁷⁰ (Second Artillery, 2004) p. 125

¹⁷¹ (Second Artillery, 2004) p. 124

¹⁷² (Second Artillery, 2004) p. 133 See also p. 126

¹⁷³ JP 3-0 p. xvi

¹⁷⁴ JP 3-0 p. xvii

¹⁷⁵ JP 3-0 p. VIII-6

¹⁷⁶ (DoD, 2006) p. 6

¹⁷⁷ (U.S. Department of Defense, 2012) E.g. pp. 4, 12

- 11.30. In summary, evidence supports this third aspect of a more context-dependent Chinese account of deterrence. In contrast, comparing classic texts does not predict this direction of difference observed above. Chinese¹⁷⁸ and Western classic texts articulate the need for capability in order to coerce. Key Western texts, however, may even predict the opposite pattern to that observed. Indeed, Carl von Clausewitz famously advocated integration of warfighting and other means in his observation that ‘war is nothing but the continuation of politics with other means.’¹⁷⁹
- 11.31. Balance of power theory does not clearly predict the degree of integration of warfighting and deterrence, although it raises a somewhat related consideration. States without allies such as China may have more offensive doctrines because, as Barry Posen suggests, ‘offensive doctrines are best for making threats’¹⁸⁰ by providing capabilities to increase the credibility of threats of war. However, this relates to offense as opposed to warfighting as a whole. Further, while this may increase a focus on offensive warfighting at the expense of deterrence, it does not necessitate the perception of the goals and activities of deterrence and warfighting as more integrated rather than distinct. Such doctrine could stress offensive warfighting, and stress the contribution such offensive capabilities make to deterrent credibility (as for example in the *JOAC* discussion of Air Sea Battle), but still view the activities of warfighting and deterrence as distinct.

HYPOTHESIS 2. OFFENSE AND DEFENSE IN CONTEXT: “ACTIVE DEFENSE” (积极防御)

- 11.32. The concepts of offense (that aims to disarm an adversary) and defense (that aims to deny them their objective) are core military concepts. Previous scholarship has examined offensive doctrines and defensive doctrines, which revealed for example how the former may lead to war (Van Evera, 1998), or how institutional or balance of power factors affect adoption of offensive or defensive doctrines. (Posen, 1984) Instead, here the cross-cultural cognitive foundations suggest two new aspects to examine. Firstly, with respect to the degree that representations of offense and defense differ, more context-dependent Chinese accounts will view them as more intimately connected parts of a whole and understood only with reference to the whole (*Hypothesis 2a*). If offense and defense are in themselves less distinct, this is significant for Western debates about how far offensive and defensive capabilities may be distinguished. (Brown et al., 2004) Secondly, in more context-dependent Chinese accounts, perceptions of actions as offensive or defensive will be more strongly influenced by the context of offense or defense with that adversary in which they occur (*Hypothesis 2b*). If major Chinese operations, even extending to the 1962 action against Indian forces or 1979 incursion into Vietnam, may be rendered defensive by occurring within a context of defense, this may be perceived very differently by the U.S..
- 11.33. Chinese thinking on the concepts of offense and defense is illustrated by a key principle of Chinese doctrine: ‘active defense’, whose essence is the holistic integration of offense and defense. ‘Active defense’ has formed a primary strategic

¹⁷⁸ E.g. (Johnston, 1995) pp. 82-3

¹⁷⁹ (Clausewitz, 2008) p. 7

¹⁸⁰ (Posen, 1984) p. 70

idea and key guiding principle throughout the period from at least 1949 to the present day.¹⁸¹ Its prominence is indicated by Chinese figures such as General Zhang Wannian who described it as China's 'foundational strategic idea'¹⁸² and it features prominently in the 1998, 2000, 2002 and 2015 versions of the biennial Chinese Defense White Papers. As then Defense Minister Peng Dehuai explained in 1957 about active defense: '...in military matters our country has a guiding principle of strategic defense, ... [that] ought not to be passive defense; instead, it should be guided by the strategic principle of active defense.'¹⁸³ I discuss two ways that greater Chinese context-dependence affects representations of offense and defense.

- 11.34. Firstly, *Hypothesis 2a suggests that Chinese accounts view offense and defense together more holistically*. This is supported by a number of Chinese scholars and decision-makers.¹⁸⁴ As influential Chinese scholar Xia Liping notes, active defense conceives of warfare as a 'holistic entity that includes offensive as well as defensive action.'¹⁸⁵ Senior Colonel Wang Naiming explains: '[active defense]...emphasizes that the nature of our military strategy is defensive, but also active in requirements. It requires the organic integration of offense and defense, and achieving the strategic goal of defense by active offense; when the conditions are ripe, the strategic defense should be led [sic] to counterattack and offense'.¹⁸⁶ General Zhang Wannian states that Active Defense 'organically combines strategic defense with campaign battle offense...to weaken the enemy and realize strategically defensive goals through offensive operations with quickly decisive battles.'¹⁸⁷ According to Deng Xiaoping, 'active defense is not merely defense per se, but includes defensive offensives.'¹⁸⁸ U.S. China scholars also note what, for example, Andrew Scobell describes as 'this "organic integration" between offense and defense'.¹⁸⁹ As the *Science of Second Artillery Campaigns* notes¹⁹⁰: 'Our military's strategic guideline is "active defense."... [in which] Active defense is not simply only defense, there is offense within defense'. It goes on to state that the key 'idea of "strike the enemy at the first opportunity, engage in focused strike" emphasizes the synthesis of offense and defense.'
- 11.35. Secondly, *Hypothesis 2b suggests that in Chinese accounts, perceptions of actions as offensive or defensive will be more strongly influenced by the context of offense or defense with that adversary in which they occur*. Most importantly, the centrality and prominence of the idea of active defense in itself provides a striking example in which offensive actions in particular must be seen in a broader context of offense or defense.
- 11.36. Moreover, one may also ask if this can go further such that a context of defense more readily renders even first strikes or pre-emptive actions as defensive. It is

¹⁸¹ E.g. (Scobell, 2003) pp. 34 – 35; (Fravel, 2016)

¹⁸² M. Taylor Fravel, "The evolution of China's military strategy: comparing the 1987 and 1999 editions of *Zhanlüexue*", in Mulvenon and Finkelstein *China's Revolution in Doctrinal Affairs*. p. 86

¹⁸³ (Scobell, 2003) pp. 34-5.

¹⁸⁴ Interviews 2014 and 2017.

¹⁸⁵ Xia Liping 'China's Military Strategy of Active Defense,' *Xuexi Shibao*, December 12, 2005. Quoted in (Wortzel, 2007) p. 8

¹⁸⁶ Wang Naiming, "Adhere to Active Defense and Modern People's War" in Pillsbury, ed., *Chinese Views of Future Warfare*, Washington DC: National Defense University Press, 1997, p. 37.

¹⁸⁷ Zhang Wannian, *Dangdai shijie junshi yu zhongguo guofang*, Beijing: AMS Press, 1999. p.177. Quoted in Fravel, *The evolution of China's military strategy* p. 87

¹⁸⁸ (Scobell, 2003) p. 35

¹⁸⁹ (Scobell, 2003) p. 35

¹⁹⁰ (Second Artillery, 2004) pp. 323-4

reported that some Chinese scholars believe that ‘active defense’ permits the conduct of preemptive attacks.¹⁹¹ An Academy of Military Sciences researcher also notes that active defense does not rule out a first strike: ‘Our strategic principle of ‘striking only after the enemy has struck’ certainly does not exclude sudden ‘first strikes’ in campaign battles or counterattacks in self-defense into enemy territory.’¹⁹²

- 11.37. In writing on modern Sino-U.S. crisis management Wang Jisi, Peking University’s influential Dean of the School of International Studies, draws lessons from how China struck first but called the border war with India in 1962 and that with Vietnam in 1979 “defensive counterattacks.”¹⁹³ As Wang continues, ‘Probably basing its statements on the same reasoning, China during the EP-3 incident insisted from the beginning that “all responsibilities lie on the U.S. side,” and China therefore presented a moral case in which the PLA was making a defensive move near Chinese coastal lines where the U.S. aircraft was on a mission of spying on China. Thus the technical and tactical complexities were of secondary importance in managing the crisis.’
- 11.38. The powerful reach of this context-dependence to affect perceptions of offensive actions is illustrated in three further ways. Firstly, its scope extends considerably beyond small-scale offensives within ongoing confrontations. For example, even such a large operation as the 1979 invasion of Vietnam involving some 200,000-400,000 soldiers—a similar scale to the November 1950 assault in Korea¹⁹⁴—was characterised as a ‘self-defensive counterattack against Vietnam’ within the context of the Vietnamese invasion of Cambodia and treaty with the USSR. Secondly, its scope extends beyond only an adversary’s military actions providing a context that can render a Chinese first strike as defensive. As the *Science of Military Strategy* points out, there can be “the first shot” on the plane of politics and strategy ... [and that when] any country or organization violates the other country’s sovereignty and territorial integrity, the other side will have the right to “fire the first shot” on the plane of tactics.¹⁹⁵ Thirdly, such considerations impinge upon key Chinese pronouncements such as No First Use (NFU) of nuclear weapons. As former National Security Council senior director for Asia Evan Medeiros wrote in his scholarly work¹⁹⁶, ‘Chinese writings on NFU are expressed via the core operational concept of *houfa zhiren* or “gaining mastery by counter-attacking.”’ But he notes some military writings make it unclear in what contexts NFU applies, such that ‘preemption in some circumstances can be consistent with *houfa zhiren*’.
- 11.39. In comparison, U.S. thinking clearly has no similarly fundamental guiding principle like ‘active defense’ that holistically integrates offense with defense, and in which a context of strategic defense renders major, potentially preemptive or first strike, offensives as defensive.¹⁹⁷ Of course I do not claim there is no such U.S. thinking¹⁹⁸,

¹⁹¹ (Wortzel, 2007) p. 9

¹⁹² Chen, “Zhongguo xiandai jubu zhanzheng,” p. 46. See also Nan Li, “The PLA’s Evolving Warfighting Doctrine, Strategy, and Tactics, 1985 – 95: A Chinese Perspective,” *China Quarterly* 146 (June 1996):443 – 63. Discussed in (Scobell, 2003) p. 35

¹⁹³ Wang Jisi and Xu Hui, “Pattern of Sino-American Crises: A Chinese Perspective,” in (Swaine et al., 2006) pp. 141-142

¹⁹⁴ (Kissinger, 2011) pp. 367-8

¹⁹⁵ (Peng and Yao, 2005) pp. 426

¹⁹⁶ Evan S. Medeiros, “Evolving Nuclear Doctrine,” in Paul J. Bolt and Albert S. Willner, *China’s Nuclear Future* (Boulder: Lynne Rienner Publishers, 2006), p. 68.

¹⁹⁷ Interviews 2014 and 2017.

¹⁹⁸ For instance, strands of U.S. thinking in the 1970s and 80s discussed nuclear warfighting and noted active as well as passive defense, e.g. (Gray, 1984) p. 24

as all humans, human groups and societies need to think in both context-dependent and independent ways. But whilst U.S. doctrine discusses offensive actions occurring within the context of defense—for instance, the *JP 3-0* discusses the roles of offense, defense and stability throughout campaigns¹⁹⁹, and the *DO-JOC* contains a minor note on active in addition to passive defense²⁰⁰—this is far less prominent and pervasive than in the Chinese case.

Hypothesis 2. Summary and alternative explanations

11.40. This difference between Western and Chinese thinking is not clearly predicted by classic texts, which in both traditions contain elements integrating offense and defense. In the Chinese case, one prominent analysis of the *Seven Military Classics* centres on the notion of '*quanbian*' or 'absolute flexibility' in the use of more offensive or defensive options depending on context.²⁰¹ In the Western tradition, Thucydides described defensive-and-offensive alliances ('symmarchy') as well as defensive alliances ('empimachy').²⁰² Again, other Western texts suggest the opposite direction of effect to that observed above. For instance, Clausewitz described defense as 'the parrying of a blow' and its characteristic feature as 'awaiting the blow', but he went on to describe how defense includes the offensive such that it is a 'shield made up of well-directed blows'.²⁰³ Balance of power theory does not speak directly to the degree of integration of offense and defense in modern China or the U.S.. One may, though, add another factor. Although not itself included in balance of power theory, if one also adds a rhetorical requirement to sound defensive (for internal or international audiences) then, coupled with balance of power theory suggesting more offensive Chinese than U.S. doctrine²⁰⁴, this may suggest greater Chinese rhetorical reconciliation between offense and defense. However, if rhetorically driven it might not be expected to appear so pervasively and prominently in classified military texts as described above. Further, as a number of Chinese interviewees noted, concepts such as 'active defense' were understood to be highly problematic rhetorically amongst other states in whom they raised fears of offensive intentions.²⁰⁵

CONCLUSIONS AND CONTEXT-DEPENDENCE MORE BROADLY IN CHINESE STRATEGIC THINKING

11.41. A context-dependence and independence framework based in robust cross-cultural cognitive foundations provides a unified and simple account across a number of differences in Chinese versus U.S. thinking on deterrence, defense and offense. Specifically,

¹⁹⁹ JP 3-0 pp. V-15 to V-16

²⁰⁰ (DoD, 2006) p. 37

²⁰¹ (Johnston, 1995) pp. 1-2-3, 148-52

²⁰² (Van Evera, 1998) p. 15

²⁰³ (Clausewitz, 2008) p. 159

²⁰⁴ (Posen, 1984) pp. 78-9. Among the list of 13 points Posen suggests arise from balance of power theory to drive offense and defense in doctrine, more may currently favour offensive doctrine for China (4 points [his points 2, 4, 5 and 6]) than the U.S. (2 points [his 3 and 7]), and favour defensive doctrine for the U.S. (3 points [his 10, 11 and 13] and none for China).

²⁰⁵ Interviews and discussions Beijing and Shanghai 2014 and 2017. Misunderstanding of such Chinese concepts was noted as a reason for

- Finding 1 that in Chinese accounts perceptions of events and actions depend more on their deterrent, defensive or offensive *context*; and
 - Finding 2 that in Chinese accounts the categories of offense, defense or deterrence are themselves be understood more holistically together.
- 11.42. Neither classic texts acting across millennia or centuries, nor balance of power theory clearly predicts these cross-cultural differences. In fact, high context-dependence appears to be pervasive in Chinese strategic thought, in keeping with its reflecting a general principle that parsimoniously simplifies and unifies across multiple phenomena. A fruitful avenue for future analyses, I outline further broad examples below.
- 11.43. Firstly, as one Central Military Commission officer described to the author²⁰⁶ deterrence, offense and defense are together seen holistically, as intimately interconnected and understood as part of a whole. Context-dependence as a general principle is also seen more broadly at the level of guidance for commanders in the Science of Second Artillery Campaigns:²⁰⁷
- 11.44. ‘When carrying out campaign guiding ideologies, commanders should grasp the following few questions. First question is correctly handling the Relationship between Deterrence and Actual Warfare. Deterrence and actual warfare are interconnected, coexistent, similarly conditioned and closely integrated organic wholes. ... Second question is correctly handling the relationship between the initiative and passivity. Our military’s strategic concept of active defense is clear. ... Third question is correctly handling the relationship between the overall situation and the local situation. ... That which is “local” is part of the “overall.” ... Fourth question is correctly handling the relationship between strong and weak. Strong and weak are united by contradiction. Within strength there is weakness, and within weakness there is strength.’
- 11.45. Secondly, Chinese writing also stresses looking to the broader context of the ‘overall situation’ (*Da Ju*) to which actions or narrower interests subordinate. This has been identified across ancient Chinese, Mao Zedong’s and modern PLA thinking²⁰⁸, as well as that in contemporary crisis management.²⁰⁹
- 11.46. A third example is seen at the broadest strategic level. As the prominent Chinese scholar Li Bin notes, Chinese understanding of the threats actors face in international system relates more to general contexts than specific agents.²¹⁰
- 11.47. ‘The core concept in the American security paradigm is “national security threat.” ... usually defined as a rival who has the capability and intention to hurt the United States. ... In China, there is an indigenous security paradigm in which “national security challenge” is a core concept. Unlike “national security threat” in the American paradigm, a “national security challenge” in the Chinese paradigm is a situation in which China is vulnerable. ... For example, it is a belief in China that lagging behind technologically leaves China vulnerable to attacks. “Lagging behind” is a situation ...

²⁰⁶ Interview, Beijing, June 2017

²⁰⁷ (Second Artillery, 2004) pp. 126-7

²⁰⁸ Ron Christman, “How Beijing Evaluates Military Campaigns: An Initial Assessment”, in *The Lessons of History: The Chinese People’s Liberation Army at 75*, ed. Laurie Burkitt, Andrew Scobell, and Larry M. Wortzel (Pa.: Strategic Studies Institute, 2003).

²⁰⁹ (Johnston, 2016)p. 46

²¹⁰ Li Bin, “China and Global Nuclear Arms Control and Disarmament” in *The War That Must Never Be Fought: Dilemmas of Nuclear Deterrence*, ed. George P. Shultz and James E. Goodby pp. 357-8. See also pp. 364-5

The Chinese security paradigm is sometimes called a “comprehensive security concept” or “comprehensive security theory.’

- 11.48. One can also note ‘integrated deterrence’ in Chinese strategic thinking, in which one must consider together multiple military and non-military levers to affect an adversary’s decision-making.(Chase and Chan, 2016) Other examples include Chinese approaches to ‘information warfare’ and cyber security that critically view such topics more within their wider context than in the Western security community.(Giles and Hagestad, 2013) This is not to state that all Chinese thinking or thinkers are more context-dependent than in the U.S., but rather this provides a useful perspective to parsimoniously capture diverse and significant aspects of the Chinese strategic worldview or ‘cultural thoughtway’.
- 11.49. The next chapter will go on to explore the implications of another cross-cultural cognitive finding.

Chapter 12 How are others influenced? Chinese thinking on soft power and bandwagoning

- 12.1. A second core finding from cross-cultural cognition relates to the nature of how others are influenced, with a greater role amongst East Asians for social influence leading to adjustment, conformity and harmony. In this chapter I examine how finding relates to two aspects of Chinese and US strategic thinking.
- 12.2. *Finding 3 Chinese accounts expect audiences to be more strongly influenced by others' opinions, attitudes or norms so the audiences show more conformity or adjustment for social harmony.*
- (3a) *China places greater emphasis on social influence exerted through soft power.*
 - (3b) *China does soft power differently, placing a greater emphasis in the content of that soft power on themes of adjustment, conformity and harmony. This is seen in the themes of both President Hu Jintao's 'Harmonious World' and Xi Jinping's 'China Dream.'*
- 12.3. *Finding 4 Chinese accounts tend to expect more adjustment or conformity from audiences (i.e. more 'bandwagoning') rather than actions affirming audiences' autonomy (i.e. 'balancing').* Empirical evidence for this fourth finding is tentative.

INTRODUCTION

- 12.4. The cross-cultural cognitive finding explored in this chapter is that: *East Asians tend to understand their social world as more interconnected, so that an agent's behaviour, attitudes or perceptions will be more affected by others' opinions, attitudes or norms, and thus the agent shows more conformity or adjustment for social harmony. In contrast, Westerners understand their social world as more independent, so agents will have less sensitivity to social cues and more greatly value actions that affirm autonomy.*
- 12.5. Such cultural differences in social orientation have been discussed under the closely related concepts of independent and interdependent self-construal²¹¹, individualism-collectivism that contrasts a primary concern for oneself relative to the group(s) to which one belongs²¹², or tightness-looseness that reflects the strength of cultural norms and tolerance of deviant behavior (Gelfand et al., 2011a). Chapter 7 discusses this in more detail and also notes that, while we do see some replication, the robustness of this finding is not as robust as that related to context-dependence.

HYPOTHESIS 3: CHINESE PLACE MORE EMPHASIS ON 'SOFT POWER' AND DO SOFT POWER DIFFERENTLY

- 12.6. Drawing on this cross-cognitive foundation, *Hypothesis 3 suggests that Chinese accounts expect audiences to be more strongly influenced by others' opinions, attitudes or norms so the audiences show more conformity or adjustment for social harmony.* I discuss two aspects, firstly that the Chinese will place a greater emphasis

²¹¹ E.g. Shinobu Kitayama et al., "Self as cultural mode of being" in (Kitayama and Cohen, 2007)

²¹² Discussed in e.g. (Heine, 2015) pp. 217-222

on the social influence exerted through soft power²¹³ (*Hypothesis 3a*), and secondly a greater emphasis in the content of that soft power on themes of adjustment, conformity and harmony (*Hypothesis 3b*).

- 12.7. Firstly, *Hypothesis 3a* proposes that the Chinese strategic community more greatly emphasises influencing others through social means such as ‘soft power’. Multiple sources of evidence suggest the Chinese strategic community places more emphasis on social influence through ‘soft power’ than is the case in the U.S. First is greater Chinese high-level policy support.²¹⁴ For instance, the political report to the 2002 Chinese Communist Party (CCP) Congress pointed out: ‘In today’s world, culture intertwines with economics and politics, *demonstrating* a more prominent position and role in the competition for comprehensive national power.’²¹⁵ In 2011 President Hu Jintao stated ‘We should bring Chinese culture to the world, develop cultural soft power compatible with China’s international standing, and increase the influence of Chinese culture in the world.’(Shambaugh, 2013) This continued under President Xi Jinping. For instance, Xi’s key ‘Chinese Dream’ idea is linked to ‘soft power’ as detailed below, and a 2017 CCP Central Committee and State Council policy opinion document notes the importance of transmitting China’s culture to make it a socialist culture great power and strengthen ‘national cultural soft power.’²¹⁶ Second, the Chinese Government spends considerably more than the U.S.. One estimate puts the annual ‘external propaganda’ budget at around \$10 billion annually, compared to U.S. State Department public diplomacy spending of \$666 million in fiscal year 2014.(Shambaugh, 2015) Third is a particularly strong push towards ‘soft power’ in China’s military doctrine. For instance, the Central Military Commission (CMC) officially adopted the ‘three warfares’ concept—psychological warfare, media warfare and political warfare—in 2003, a development suggested to have arisen following CMC Chairman Jiang Zemin’s proposal to attend more to psychological operations.²¹⁷
- 12.8. A second hypothesis relates to the idea that different cultural accounts of others provides different expectations about what *content* of ‘soft power’ messages will resonate with them. Thus, *Hypothesis 3b* suggests that the Chinese strategic community will more greatly stress social interconnectedness, adjustment, conformity and harmony in the content of its soft power. Considerable evidence supports the prominence of such content in both Chinese policy and its strategic community’s debates. Indeed, they are central to the last two main foreign policy *themes*: President Hu Jintao’s ‘Harmonious world’ (*hexie shijie*) stressing harmony; and President Xi Jinping’s ‘Chinese/China Dream’ (*Zhongguo meng*) stressing harmony and a crucial collective element.

²¹³ Chinese use of the term ‘soft power’ is argued to be broader than that proposed by Joseph Nye, for example including public diplomacy, and I follow this here to include the influence of non-kinetic or non-military means more broadly under the general category of ‘soft power’. E.g. (Mingjiang, 2008)

²¹⁴ (Shambaugh, 2013) p. 25

²¹⁵ Jiang Zemin, Political Report to the 16th CCP Congress, November 8, 2002. Quoted in (Mingjiang, 2008). p. 289

²¹⁶ Central People’s Government of the People’s Republic of China (2017) http://www.gov.cn/zhengce/2017-01/25/content_5163472.htm From Kingsley Edney “‘Cultural Security’, Power Transition and US-China Relations” (unpublished).

²¹⁷ (Lee, 2014) p. 5

- 12.9. Regarding 'Harmonious World', Hu's key 2005 United Nations speech introducing it²¹⁸ stressed the need to 'jointly build towards a harmonious world where all civilizations coexist and accommodate each other. ... Throughout the long history, human communities have never been so closely interconnected in interests and destinies.' He noted that achieving a harmonious world involved: effective multilateralism, a collective security mechanism, prosperity through cooperation, and tolerance and dialogue among civilizations. Scholar David Shambaugh noted its importance²¹⁹, describing it in 2013 as a 'cornerstone of China's international messaging in recent years' in which 'the Chinese Government has invested enormous resources and effort.'
- 12.10. Xi outlined the Chinese Dream in a 2012 speech and official 'China Dream' book (Xi, 2014) As Xi put it: 'The China dream is the inner meaning of upholding and developing socialism with Chinese characteristics', with its essence 'a rich and powerful country, revitalizing the nation and enhancing the well-being of the people.'²²⁰ The party propagandises this socialism's 'core values' as 'prosperity, democracy, civility, harmony, freedom, equality, justice, the rule of law, patriotism, dedication, integrity and friendship.'²²¹ Described by foreign minister Wang Yi as Xi's key conceptual innovation in foreign affairs; Xi devoted Chapter 7 of his 'China Dream' book to explain it globally.²²² Xi declared that to 'realise the China dream', the PRC needs to 'enhance [its] national cultural soft power'.²²³
- 12.11. The Chinese Dream's content centrally involves harmony and has an important collective element explicitly contrasted against more individualist Western ideas. Harmony is a core value, as illustrated above and also for instance in the party theoretical journal *Qiushi* that stated the Chinese dream is to work for a harmonious world.²²⁴ Scholar David Kerr notes the critical collective element, where 'the China Dream is a clever negotiation between collective identity and individual aspirations.'(Kerr, 2015) As Xi describes, when the Chinese Dream is fulfilled by 2049 China will be 'strong, democratic, culturally advanced, and harmonious', with young Chinese immersed in 'patriotism, collectivism, and socialism'²²⁵ The Chinese Dream is usually discussed as a challenge to the American dream. For instance, just before Xi's 2013 U.S. trip to meet President Barak Obama, the *People's Daily* explained the 'Seven Major Differences between the China Dream and the American Dream' in terms of China's dream of national wealth and power, and Americans' dreams of personal freedom and happiness.²²⁶
- 12.12. Such content is also seen more broadly. Harmony-with-diversity was reportedly Premier Wen Jiabao's 'most frequently used' Chinese idiom on his 2003 U.S. visit.²²⁷ Many Chinese scholars stress the importance of harmony. The Central Party School's Men Honghua, for instance, who authored the important book *China's Soft*

²¹⁸ <http://www.un.org/webcast/summit2005/statements15/china050915eng.pdf>

²¹⁹ (Shambaugh, 2013) pp. 25, 219-20

²²⁰ (Ferdinand, 2016) p. 945

²²¹ Du Yifei, '24-word core socialist values engraved on people's mind', *People's Daily*, 2 March 2016, <http://en.people.cn/n3/2016/0302/c98649-9023926.html>. Quoted in (Ferdinand, 2016) p. 945

²²² (Callahan, 2015a) p. 996

²²³ Xi, *The Governance of China*

²²⁴ (Dreyer, 2015) p. 1018.

²²⁵ Xi, *The Governance of China*

²²⁶ This and related Chinese ideas are discussed in (Callahan, 2015b) p. 223

²²⁷ (Callahan, 2015a) p. 995

Power Strategy, stresses the universality of four core Chinese values: peace and harmony, morality, etiquette and benevolence.²²⁸ The influential scholar Yan Xuetong has described his theory of 'moral realism'²²⁹ in which states will adjust to a benign ruler. In contrast, U.S. soft power or public diplomacy activities, or strategic community's debates, do not similarly stress such themes.

Hypothesis 3. Summary and alternative explanations

- 12.13. In summary, the overall picture is consistent with *Hypothesis 3* based in cross-cultural cognitive foundations. One sees a greater Chinese emphasis on the social influence activities, as well as a greater emphasis in the content involving adjustment, conformity and harmony.
- 12.14. But how far is this cross-cultural different emphasis (*Hypothesis 3a*) and content (*Hypothesis 3b*) predicted by alternative explanations for differences in strategic thought? In this case, comparing classic texts is broadly consistent with the direction of effects observed above. President Hu's close advisor, Yu Keping, saw 'harmonious world' as a 'new take on the development of the ancient Chinese dream of Tianxia Datong (the great harmony of the world).'²³⁰ Scholar Yan Xuetong's 'moral realism' is explicitly rooted in Chinese classics.²³¹ These are long-running themes from Chinese classics (Callahan, 2015a; Dreyer, 2015; Ford, 2010). However, this should not be overstated. Other important strands in the Chinese classics stress military power, such as within the *Seven Military Classics* (Johnston, 1995), whilst in the Western classics Thucydides' report of Pericles' funeral oration may, for example, be taken to articulate soft power's importance. Balance of power theory may also be consistent with a greater Chinese emphasis on soft power if one views it as a plausible means to help asymmetrically offset greatly superior U.S. military power – although balance of power theory is mute on the content of such soft power.

HYPOTHESIS 4 CHINESE EXPECT MORE BANDWAGONING

- 12.15. A further implication relates to expectations of whether power influences other states to either 'balance' against strong or threatening states, or 'bandwagon' and so adjust or conform with them.²³² Expectations about others' propensity to bandwagon or balance matters because policies appropriate for one will backfire in the other case. Given the cross-cultural psychology finding of greater Chinese expectation of adjustment and conformity, *Hypothesis 4 suggests that Chinese accounts will tend to expect more adjustment or conformity from audiences (i.e. more 'bandwagoning') rather than actions affirming audiences' autonomy (i.e. 'balancing')*. Importantly, whether secondary states' actual behaviour is to balance (Ross, 2006) or instead East Asian culture leads to more bandwagoning (Kang, 2003) - the point here is that Chinese and U.S. expectations may differ.

²²⁸ (Shambaugh, 2013) p. 212. For further examples see e.g. (Mingjiang, 2008) pp. 298, 304, 305.

²²⁹ Yan Xuetong, *Ancient Chinese Thought, Modern Chinese Power*, (Princeton: Princeton University Press, 2013); (Yan, 2014)

²³⁰ Quoted in (Callahan, 2008) p. 758

²³¹ Yan, *Ancient Chinese Thought, Modern Chinese Power*.

²³² Waltz, *Theory of International Politics*, Chapter 6.

- 12.16. Whilst Stephen Walt notes some Western statesmen expect more balancing and others more bandwagoning (Walt, 1990) and Chinese expectations will likely also be heterogeneous, there is tentative support for such a view. Samuel Huntington noted twentieth Century China expected *bandwagoning* domestically, and may regionally too (Huntington, 1996). June Dreyer discusses Chinese ideas of how other regional states will change their minds and adjust as China becomes more powerful²³³, in the context of the prominent Chinese idea of a 'Tianxia' system involving a Sino-centric hierarchical relationship among unequals, governed according to Confucian principles of benevolence. She discusses, for instance, how in 2010, the then-Chinese foreign minister Yang Jiechi told an ASEAN gathering that China was a big country, and they would have to understand that they were small countries. In 2012, Beijing's political responsibility, to use Yan Xuetong's term described below, included persuading ASEAN host country Cambodia to keep the issue of contested South China Sea territories off the association's agenda.'
- 12.17. We also see such tendencies described amongst Chinese scholars. A July 2014 report by the International Crisis Group cites Chinese analysts as stating that disputes will ultimately be determined by '*a contest of comprehensive national power*', and predicts that when China's dominance becomes indisputable '*the other countries' attitudes will change*'. The influential Tsinghua University scholar Yan Xuetong has described his theory of 'moral realism' (Yan, 2013, 2014) in which states will adjust to a benign ruler. Yan, for example, noted in a December 2006 analysis of China's comprehensive national power that was published on the *first* page of Renmin Ribao's overseas edition, that the PRC, having already reached a position of global economic primacy, had 'assumed political responsibility' for adjacent countries.²³⁴
- 12.18. Overall, empirical evidence regarding this fourth hypothesis is tentative.

SUMMARY

- 12.19. Once again we find evidence consistent with the cross-cultural cognitive finding of with a greater role amongst East Asians for social influence leading to adjustment, conformity and harmony. It is not, however, as clear cut as seen with context-dependence and independent framework examined in the previous chapter.

²³³ (Dreyer, 2015) pp. 1028-1030. Tianxia and a relationship where others are expected to adjust to China as it becomes more powerful is also discussed in e.g. Zhao in Barr (2011); Nathan and Scobell (2012) p26, fn 16 p 364.

²³⁴ Yan Xuetong, 'China's first step forward in its "harmonious world-oriented" diplomacy', Renmin Ribao, (19 December 2006), p. 1.

Chapter 13 Strategic culture and individual cognition: Conclusions for Part III

13.1. In this last chapter I discuss implications for theory, policy and future research

INTRODUCTION

- 13.2. Can we know if, and how, culture affects behaviour and perception in international relations? This report presents an extra independent source of empirical evidence for cultural differences: the extensive and established field of cross-cultural cognitive science. I show that these cross-cultural cognitive foundations provide parsimonious, unified explanations across multiple differences in significant aspects of U.S. and Chinese strategic thought. There is striking convergence between empirical evidence from these cross-cultural cognitive foundations, and independent empirical evidence from cross-cultural comparison of strategic thought – where both converge to provide consistent evidence that is stronger than either source alone. Consilience is particularly significant to help choose between competing hypotheses at the strategic level, where multiple plausible explanations almost always exist.
- 13.3. Further, although millennia or centuries old classic texts are often invoked to understand, for example, Chinese culture, these did not clearly predict important differences here. Neither did balance of power theory clearly predict the significant differences examined here. Indeed, observations from cross-cultural cognitive foundations can usefully augment balance of power theory to explain differences in strategic thinking between polities (Posen, 1984).
- 13.4. In this last chapter I discuss implications for theory, policy and future research.

IMPLICATIONS FOR INTERNATIONAL RELATIONS SCHOLARSHIP

- 13.5. A first implication arises from a serious weakness in cognitive science, as most cognitive research examines a highly unrepresentative ‘*WEIRD*’ sample of the world’s population, often U.S. undergraduates. Not all evidence from cognitive science is equal. IR scholars building on such cognitive foundations and seeking to extrapolate between cultures, for example to Sino-U.S. interactions, should where possible look for work examining those cognitive foundations cross-culturally.
- 13.6. Second, IR must cope with the ‘*replication crisis*’ in which many cognitive findings are not replicated. Scholarship seeking to build IR on firm cognitive foundations, even within cultures, should where possible use systematically identified and evaluated bodies of work (e.g. Part II of this report). Attractive psychological theories and high profile or intriguing studies are usually insufficient.
- 13.7. Third, this work highlights that a—perhaps the—key use that the huge body of cognitive science knowledge has for the social sciences is *consilience*. Consilience provides independent empirical evidence to support choices between multiple plausible theories at the strategic level: just as understanding the cellular level in the human heart helps explain many of the heart’s properties at the systems level in the body. Of course, emergent properties are also crucial. Both matter.

- 13.8. Fourth, core insights from these cross-cultural cognitive foundations provide a parsimonious *framework* for integrating across diverse aspects of behaviour, and provide fresh empirical evidence and theoretical insight to augment existing IR theories. For example, it provides realism with new insights about key aspects of deterrence, offense and defence.
- 13.9. Fifth, cross-cultural cognitive foundations highlight the existence of different worldviews that render different sets of ideas more intuitively plausible, making a '*Chinese IR theory*' (Yaqing, 2012) more likely to emerge.

POLICY IMPLICATIONS

- 13.10. But, so what: even if cross-cultural differences exist, does that matter much for policy? Consider the challenge of managing inadvertent escalation in near-term Sino-U.S. contingencies. Pathways for inadvertent escalation during confrontations involve series of steps perceived to reflect increased intensity or scope of actions, which are inherently subjective for both sides (Morgan et al., 2008). This paper details specific ways these steps will be understood as more discrete in context-independent U.S. accounts but more integrated in context-dependent Chinese accounts, where the differing perceptions can lead to inadvertent escalation.²³⁵
- 13.11. Firstly, U.S. deterrent threats, framed in U.S. terms as a deterrent action, may instead be more readily perceived as little different to more offensive compellent activities from within the broader Chinese concept in which compellence and deterrence do not meaningfully differ. In turn, when making actions, the Chinese 'deterrent' toolkit will include the more 'compellent' tools (e.g. more forceful naval and paramilitary activities in the South China and East China seas, or blockade in a Taiwan contingency) that to U.S. observers would fall outside their narrower understanding of deterrence.
- 13.12. Second, one can consider Chinese thinking where acts—even striking first or preemptive actions—occurring in the context of a deterrent strategy can be rendered part of deterrence. Chinese acts such as firing shots at ships during a blockade, or even a missile attack, may be anticipated as less escalatory than will be perceived from a U.S. perspective viewing the act shorn of context.
- 13.13. Third, a Chinese perspective in which deterrence and warfighting are 'dialectically unified' may view U.S. deterrent actions as more warfighting-related.
- 13.14. Fourth, Chinese may sincerely perceive that offense within a context of defence renders even major actions defensive, but if others do not perceive such context then others will respond to their own perception rather than what was intended.
- 13.15. Policymakers are often beseeched to put themselves in others' shoes, but practically doing this requires specific questions. Taken together, a context dependent-independent framework provides analysts with specific questions to help put themselves in the others' shoes, in order to anticipate effects of potential actions on others and to interpret actions. To militate against their cultural prisms, U.S. analysis can specifically ask 'what is the broader context of this action'; and Chinese analysts can ask 'how would an action look if shorn of context'?

²³⁵ Other applications include 'tailoring' deterrence.

FUTURE RESEARCH

- 13.16. Finally, looking forwards, this paper provides methods to identify robust cognitive foundations that give specific hypotheses for a research programme in cross-cultural political science. It examined empirical evidence at the strategic level, and numerous fruitful avenues exist for future work. It can test the hypotheses against the record of U.S. and Chinese military employments. It can examine additional cross-cultural cognitive foundations (e.g. robust cultural commonalities) and areas of strategic thought. It can examine additional international actors, although cross-cultural cognitive work is very limited outside East Asia, for example limiting robust inferences in Russia or India.
- 13.17. Such a programme matters. Considerable empirical and theoretical research across diverse fields including neuroscience, psychology, behavioural economics and anthropology together suggest robust commonalities and differences in decision-making between cultures. In a globalised world where key interactions are cross-cultural, not least between China and the U.S., we must understand if culture matters and, if so, specifically how.

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