

Clearer Than Truth:

Performing Science and Narrating Risk in Cold War US

Foreign Policy



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Abstract

This thesis illuminates one way in which America articulated and practiced preponderant power in the early Cold War era: as the management of global risks. I argue that this was not predetermined, but contingent on encounters between US policymakers and scientific experts. Existing theories of experts in IR do not provide a satisfactory account of these encounters or their political consequences. These theories presume rather than explain experts' authority, and reduce their activities to rhetorical manoeuvres such as persuasion or securitisation.

Drawing on the work of Erving Goffman, supplemented by insights from constructivist IR theory, science and technology studies, and anthropology, I develop an alternative theory of expertise as a dramatic spectacle. In other words, expertise is an effect of action rather than an attribute of an actor. Individuals capitalise on their reputation and social ties to create performance opportunities, they strategise backstage with collaborators to make those performances compelling, and they engage in boundary maintenance by signalling to their audience that they are 'doing science'. I conceptualise the complex of meanings that performances of expertise impart or engage with as scientific narratives. A scientific narrative is a story about a global governance object which articulates how that object places national security at risk, proposes interventions to manage those risks, and identifies an actor as responsible for intervening.

Using extensive primary source material, I trace how performances of expertise legitimised certain kinds of state action in three cases: modernisation theorists and economic assistance to Latin America, population scientists and population assistance to the developing world, and nuclear scientists and the nuclear testing debates leading up to the Partial Test Ban Treaty. Through performances of expertise and the narratives they imparted, America's leaders came to regard the postwar world as a single entity facing an array of economic, demographic, and biospheric risks that required management. I argue that risk management was an approach that was distinct from mitigating the threat posed by the Soviet Union, and just as fundamental to conceptions of national security in the first decades of the Cold War.

Declaration of previously submitted material

This work draws on material submitted as part of my thesis for the MPhil in International Relations at the University of Oxford in Trinity Term 2016. The title of this thesis is *Preconceptions and Contraceptions: The Population Establishment and US Population Policy Towards the Developing World from Eisenhower to Reagan*. The theoretical framework of my MPhil thesis differs significantly from my DPhil thesis, but the historical events discussed in Chapter 5, ‘Population scientists and population assistance to the developing world’ are the same as in Chapter 5 of the MPhil thesis, ‘The population establishment and US international population policy from Eisenhower to Reagan’. Wherever specific sections or paragraphs are adapted from the MPhil thesis, this is clearly indicated in the footnotes.

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Archives and collections consulted

National archives

Dwight D. Eisenhower Presidential Library

Gerald R. Ford Presidential Library

Harry S. Truman Presidential Library

John F. Kennedy Presidential Library

Lyndon B. Johnson Presidential Library

National Archives at College Park, Maryland

Ronald Reagan Presidential Library

Private collections

Columbia Manuscript Collection, the State Historical Society of Missouri

Harvard University Archives, Harvard University

Hoover Institution Archives, Stanford University

Hugh Moore Fund Collection, Seeley G. Mudd Manuscript Library, Princeton University

Institute Archives, Massachusetts Institute of Technology

Rockefeller Archive Centre, Rockefeller Foundation

Digitised collections

The American Presidency Project, University of California at Santa Barbara

The Avalon Project, Lillian Goldman Law Library, Yale Law School

Declassified Documents Reference System, Gale

Foreign Relations of the United States, Office of the Historian, State Department

Footnotes and quotations

Secondary sources are cited in footnotes as Author (Year), Page Number. Primary sources follow a different format to help the reader easily locate the corresponding bibliographic entry. Autobiographies, journal articles, and published reports are cited as Author (Year), Page Number. Newspaper articles, congressional hearings, archival documents, and archival documents that are published online or in printed volumes are cited as Author, 'Title', Date and Source.

Chapters 4, 5, and 6 quote extensively from primary sources. Where a primary source is quoted multiple times in one paragraph, a single footnote is appended to the last time the source is used.

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1. Introduction

At the end of World War II, the United States found itself in a uniquely powerful position. Two vast oceans insulated it from a conflict which devastated the other Great Powers. It had a monopoly on the atomic bomb, with which it ended the war. Its immensely productive wartime economy surged on the back of robust consumer spending. Its closest rival, the Soviet Union, dominated the Eurasian landmass, but at the cost of twenty-six million military and civilian lives. The USSR lagged behind the US on every measure, from industrialisation to infrastructure to weapons development.¹

Broadly speaking, there are two contrasting narratives about how the US leveraged this position. The first is a story of calculated liberal internationalism, in which America exercised strategic restraint by binding itself to multilateral institutions such as the United Nations, the Bretton Woods organisations and the North Atlantic Treaty Organisation. It underwrote the ‘public goods’ of a liberal international order in exchange for loyalty and obedience from its allies.² The second is a story of empire, in which the US built an extensive network of military bases on foreign soil to contain Communism, meddled in countries’ internal affairs when it suited them, and presided over a deeply unequal global capitalist system that enriched American corporations.³

¹ Leffler (1992).

² G. John Ikenberry is a leading proponent of this thesis in International Relations. See Ikenberry (2000, 2002, 2012). See also Lundestad (1986); Lake (1999).

³ See, for example, Williams (1962); Painter (1986); Kolko (1988); Sandars (2000), Layne (2007); Johnson (2007); Panitch and Konings (2009), especially chapters 1-2. For a critical review of the concept of American empire, see Keohane (1991); Nexon and Wright (2007). In history, the ‘American empire’ thesis is associated with the Wisconsin School of diplomatic history (William Appleman Williams, Walter LaFerber, Lloyd Gardner), as well as ‘New Left’ historians like Perry Anderson and Gabriel Kolko.

These narratives highlight, respectively, the cooperative and coercive faces of American preponderant power in the second half of the twentieth century.⁴ In this thesis, I want to draw attention to a third, *managerial*, face. It regarded the world, not as a series of countries to be conquered or liberated, but as a series of risks that required ongoing, prudential *governance*. This revealed itself in the US's participation in the multilateral arrangements and institutions we associate with global governance, but also in its foreign policy. I argue that this dimension of American power was sustained by, and inextricably linked to, the production of technoscientific knowledge about the world by experts.⁵ These experts, typically social or natural scientists and their collaborators, represented various domains like the biosphere or the economy as 'intelligible field[s] with specifiable limits and characteristics' that demanded explication, attention, and political intervention.⁶

Studying this dimension of American power, and how experts made its exercise possible, helps us to understand the apparently contradictory nature of US grand strategy during the Cold War. This was often characterised by the pursuit of profoundly illiberal policies in the name of freedom.⁷ Some writers have sought to expose this as pure hypocrisy: long-standing expansionist tendencies repackaged for an era intolerant of imperialism. Others have explained it as the unavoidable byproduct of an unresolvable tension between deeply-held ideological beliefs and the behavioural exigencies of superpower rivalry. Although one can find ample support for these verdicts in the actions and private deliberations of American

⁴ To avoid repetition, 'American' and 'US' are used interchangeably throughout this thesis, though I recognise that 'America' is also a regional designation.

⁵ I use 'technoscience' instead of just 'science' to highlight the co-production of science and technology, i.e., that the generation of scientific knowledge about the world is accompanied by the development of an array of technologies to study and manage it. See Latour (1987).

⁶ Rose (1999), p. 33.

⁷ See Desch (2008).

policymakers, both rest on a determinism that prevents deeper analysis.⁸ In this thesis, I develop an alternative view of the relationship between US state power and freedom by emphasising its mediation via knowledge and expertise.

In the world's peripheral regions, America waged the Cold War with the Soviet Union through proxy skirmishes and clandestine political interference.⁹ However, its strategies went beyond containing Communism and preserving the US's sphere of influence. Through scientific experts, American policymakers came to see their own nation's vulnerability in demographic trends and endemic poverty overseas. Moreover, they saw these problems unfolding on a global scale, and regarded the plight of individual countries as local instantiations of universal forces. They pursued global governance to cultivate societies, populations, and economies which, by achieving some optimal constitution or state, would not compromise America's national security.

These kinds of policy interventions to promote 'development' presupposed the freedom of other states and their citizens to think and act independently to improve their circumstances. Instead of crushing these capacities, American policymakers capitalised on and stimulated them.¹⁰ Hindsight revealed many of their efforts to be misguided, indifferent to local sensibilities, and occasionally harmful.¹¹ Consequently, they have been labelled illiberal. Nonetheless, freedom was a condition of possibility for this form of American governance 'at

⁸ See footnote 3 for examples of the former. For the latter, see Latham (2000); Taffet (2007).

⁹ For general histories, see Robinson (1996); Westad (2007); Carson (2018), Chapters 5-7. For regional and country-specific histories, see Gibbs (1991); McMahon (1994); Rabe (1999).

¹⁰ As Foucault puts it, 'Power is exercised only over free subjects, and only insofar as they are free. By this we mean individual or collective subjects who are faced with a field of possibilities in which several ways of behaving, several reactions and diverse comportments, may be realised'. Foucault (1983), p. 221. See also Rose (1999), p. 4.

¹¹ See Escobar (1995); Mitchell (2002).

a distance'.¹² In these cases, the US did not attempt direct rule, but tried to 'structure the field of possible action' for the citizens of these countries, engaging in what Foucault succinctly terms the 'conduct of conducts'.¹³

A similar logic was also evident in some of America's direct dealings with the Soviet Union over nuclear weapons. Historically, warring states signed treaties to end conflict and prevent their recurrence, not regulate the types and amounts of weapons that could be amassed and deployed during peacetime.¹⁴ The Hague Convention of 1899 changed this by banning expanding bullets and asphyxiating gases. The latter prohibition was revived after World War I as the Geneva Protocol, which outlawed the use of first strike chemical and biological weapons. During this period, there were also several aborted efforts to diffuse the naval arms race by limiting stockpiling.¹⁵

It was only during the Cold War, however, that more complex, totalising forms of arms control emerged, chiefly to supervise nuclear weapons. Although bombs still belonged to states, the consequences of their procurement and use were understood on a planetary scale, in terms of radioactive fallout.¹⁶ The 1963 Partial Test Ban Treaty (PTBT) governed the biosphere by outlawing nuclear testing in the atmosphere, outer space, and underwater, and the US established a sophisticated monitoring system to ensure compliance. The first arms control treaty of the nuclear age, it did not try to eliminate the possibility of nuclear war, but

¹² Rose and Miller (1992), p. 173.

¹³ Foucault (1983), p. 222.

¹⁴ Krause (2011), p. 22.

¹⁵ For histories of arms control before the nuclear age, see Kaufman (1990); Croft (1996).

¹⁶ See Masco (2010); van Munster and Sylvest (2014).

instead fashioned a framework within which the negative externalities of preparing for this possibility could be quantified and managed.

Those interested in America's nuclear weapons and those interested in its developmental ambitions rarely cross paths, so it might seem odd to study these aspects of US foreign policy together. I do so in order to highlight the common thread that runs through them. This thread is not ideological; or rather, I do not think that ideology best captures it. Ideology refers to organised systems of political beliefs; many have tried to make sense of US foreign relations, behaviours, and strategies through its prism.¹⁷ An ideological approach asks that we evaluate the relative strength of individual or collective beliefs in explaining state behaviour.¹⁸ Or, if we take a Marxist view, it frames research as an exposé: a matter of unmasking the real power relations behind the rhetoric.¹⁹

I take a different approach, arguing that these disparate aspects of American foreign policy shared a certain *rationality* of government informed by technoscientific knowledge, and oriented towards managing national security risks arising from global governance objects. By 'rationality', I mean a systematic approach to reasoning, thinking about, calculating, and responding to problems, as well as the *regimes of practice* that emerged from, enacted, and reinforced that approach.²⁰ It speaks to a form of power that I have characterised as

¹⁷ Notable examples include Leffler (1994); Kramer (1999); Hunt (2009); Westad (2017).

¹⁸ See Rathbun (2008). For a critique of ideas as beliefs, see Laffey and Weldes (1997).

¹⁹ IR studies of American foreign policy that self-identify as 'realist' often take a Marxist approach in this narrow sense, demonstrating how the US's commitment to exporting free market, democratic governments, and open societies obscures a logic of power maximisation.

²⁰ In Foucault's work, 'governmentality' has at least two distinct meanings. The first is above: the 'art of government' in general. The second refers to 'Western European societies in the "early modern period" when the art of government of the state [became] a distinct activity, and when the forms of knowledge and techniques of the human and social sciences [became] integral to it'. Dean (2010), pp. 24-28. Throughout this thesis I use 'political rationality', 'rationality of government', and 'governmental rationality' interchangeably to refer to the first meaning of governmentality. I use 'governmentalisation of the state' to refer to the second meaning.

managerial, which coexisted with, but cannot be reduced to, cooperative or coercive logics. Understanding it calls, not for a history of thought, but for a historical account of how thought ‘operates within our organised ways of doing things’.²¹ It suggests that we pay attention to those who produce and articulate technoscientific knowledge, and their role in the policymaking process. How did these experts, who often held no formal political power, had little direct experience of policymaking, and typically avoided broad-based appeals to the electorate, shape how America’s leaders governed global problems through foreign policy? What resources did these experts have at their disposal, how did they wield them, and to what political effect? These questions motivate my thesis.²²

Below, I introduce my theoretical framework and outline my case studies. I then contextualise the contributions of my research by explaining how national security replaced national defence as the paramount objective of postwar foreign policy, and how risk management and threat mitigation were two pathways to national security that were pursued simultaneously, but addressed categorically different forms of danger.

1. Scientific expertise, the American state, and global governance

Nikolas Rose writes that ‘[i]t is possible to govern only within a certain regime of intelligibility — to govern is to act under a certain description’.²³ Rule is given reason by this regime, and those who contribute to its construction can wield immense power. Who in society is

²¹ Ibid. pp. 25-27.

²² Throughout this thesis, ‘experts’ refers to ‘scientific experts’, and ‘expertise’ to ‘scientific expertise’, unless otherwise stated.

²³ Rose (1999), p. 28.

authorised to do so has varied throughout history.²⁴ Such authority derives from the ‘semistable hierarchies of value’ which sanction ‘particular ways of seeing and speaking as expert’.²⁵ These hierarchies were once primarily religious, cosmological, legal, or philosophical in nature, and still exist today. But they are eclipsed by the attachment of modern governments to ‘practices for the production of particular styles of truth telling: the truth procedures and pronouncements of objective, positive, or scientific discourses’.²⁶ This attachment creates a prominent place for scientific experts in political processes. It is particular to a form of rule that is concerned with administering ‘things’, as Foucault puts it.²⁷ By this, he means human activity abstracted and aggregated into economies, populations, and so on. Foucault calls this increasing preoccupation with regulating ‘things’ rather than directly acting on political subjects the ‘governmentalisation of the state’.²⁸ This transformation was made possible by producing knowledge about those ‘things’. It gave rise to new professions geared towards establishing the boundaries of these ‘things’, distilling their inner workings, and anticipating their future trajectories in order to suggest how they might be managed in the present.²⁹

In International Relations, scientific experts are often classed as ‘transnational actors’ alongside nongovernmental and intergovernmental organisations, multinational corporations, international standards boards and advocacy networks. Academic interest in them accelerated as the end of the Cold War prompted a disciplinary pivot away from state-

²⁴ Some examples include the *taqj*, ritual specialists who created the Mayan codex books; the *jurisperiti* of the Roman Empire, who gave expert legal advice; Jewish scribes in the Second Temple Period; and witchdoctors among the Azande of North Central Africa.

²⁵ Carr (2010), p. 17.

²⁶ Rose (1999), p. 30.

²⁷ Foucault (1991), pp. 93-94.

²⁸ Foucault (2007), p. 144; Lemke (2015).

²⁹ Lemke (2007), p. 48.

centric approaches to the study of global politics.³⁰ Many experts are certainly capable of operating transnationally, but it does not follow that they are only influential in that arena. I focus on experts who operated in and through the American state to shape its actions abroad. In doing so, I am not trying to ‘bring the state back in’ or make a case for its enduring primacy in world politics, as others have done.³¹ I treat the American state, not as an agent in itself, but as a neglected site for agency in global governance, a neglected expression of which is foreign policy.³²

I develop a theoretical argument about how scientific experts shape political rationality, and the regimes of practice associated with it, through performances of expertise that impart narratives about how global problems ought to be governed in order to achieve national security. My use of performance draws on the work of Erving Goffman, supplemented by insights from science and technology studies (STS) and anthropology. Performance implies neither disingenuousness nor frivolity. Instead, it ‘conceptualises actors in a cultural environment as performers engaged in manipulative presentations of self...who are, at the same time, constrained by the script and the consistency requirement of their roles’.³³

Performance offers a new perspective on the relationship between scientific expertise, the American state, and the governance of global problems. Its principal advantage over other theories of experts in IR, such as epistemic community theory, is that it embeds what people

³⁰ For example, Haas (1992); Risse (1994); Keck and Sikkink (1999).

³¹ For example, Drezner (2004).

³² Timothy Mitchell points out that statist approaches often endow the state with autonomous agency, but then encounter problems when trying to differentiate state from society. He says that it is better to study the state as a ‘structural effect’ of ‘detailed processes of spatial organisation, temporal arrangement, functional specification, and supervision and surveillance, which create the appearance of a world fundamentally divided into state and society...these processes create the effect of the state not only as an entity set apart from society, but as a distinct dimension of structure, framework, codification, planning and intentionality’. Mitchell (1991), p. 95. This is the position adopted here, and is discussed further in Chapter 2, Section 4.

³³ Schimmelfennig (2002), p. 417.

say in who they are, without reducing the causal effect of what they say to who they are. A scientific expert is a designated role in society; the actors who want to inhabit that role have to behave in accordance with the shared expectations that constitute it. The basis for their agency as experts is the recognition of others; that recognition is conditioned on the legibility and appropriateness of their own actions, and this circumscribes what they can say and do.

At the same time, ‘performers do not simply appear before audiences; they construct the personae they display, managing information and appearances in complex ways. Nor do events arrive ready-made on the public stage: the protagonists give them narrative structure’.³⁴ While the messages relayed by performances of expertise follow certain scripts, their encoding does not dictate their content. I conceptualise the complex of meanings that performances of expertise convey or engage with as *scientific narratives*. They specify global risks to national security and propose corrective action(s) that policymakers can take to manage them. They involve several acts: scaling a global governance object from historically specific events or data; forecasting an undesirable but avoidable future for that object, often by using models or projections; proposing interventions, which consist of technologies and policies, to manage the resulting risk (or risks) to national security; identifying an actor as responsible for intervening; and, optionally, identifying an opportunistic enemy that is waiting to exploit the consequences of non-action.

Dramaturgical analysis foregrounds the minutiae of social interaction: the performances by experts, in person and via text, before policymakers, the backstage preparations for those performances, and the scientific narratives they impart. Attending to these allows us to trace, over time, the formation of the rationality that guided American leaders’ attempts to manage

³⁴ Hilgartner (2000), p. 9.

various aspects of the postwar world, and its expression in the foreign policies that they pursued. Embedding scientific narratives in performances of expertise means that I avoid taking either one at face value. That is the stance of epistemic community theory, which theorises experts as injecting objective truths about how the world works into the policymaking process in order to enlighten decision-makers and facilitate policy coordination.³⁵ It tells us little about what experts actually do, that is, how they form and propagate these ‘truths’, or why these ‘truths’ become the basis for state action at certain times, in certain ways, but not others.

In contrast, a dramaturgical approach treats scientific narratives as part of a curated spectacle, and interrogates the backstage efforts to make that spectacle credible and convincing. This is no straightforward task, as performers come up against competing narratives levelled by other groups, including by other experts. Experts also need to navigate state institutions. In the US, the separation of powers between the executive, the legislature, and the judiciary means that policy-relevant decisions are often made in several places.³⁶ This creates a range of performance opportunities for experts, but also additional hurdles as they look to implement the interventions that their narratives propose.

By remaining sensitive to these factors, my approach suggests that there is nothing preordained or inevitable about managerial power: that the ways in which America’s leaders came to appreciate what needed to be governed, how, and why, were contingent on sustained encounters with performers of scientific expertise. Specifically, successive administrations came to see their own *neglect* as a key source of vulnerability. By leaving developing economies unstimulated, population growth uncontrolled, and nuclear testing unregulated, they

³⁵ Haas (1992); Adler and Haas (1992).

³⁶ Baumgartner and Jones (2009), p. 32.

compromised national security. Achieving security was not just a negative, defensive exercise — protecting the nation by removing threats — but a positive and pastoral activity: a matter of governing global ‘things’ through judicious risk management.

2. Case studies

To make my argument, I consider three episodes of US history during the early Cold War: modernisation theorists and foreign aid for economic development to Latin America, population scientists and population assistance to the developing world, and nuclear scientists and the nuclear testing debates leading up to the PTBT. In the first two case studies, I analyse how scientific narratives conveyed through performances of expertise defined global risks to national security and legitimised ways of managing them, making it possible for certain foreign policies to be enacted. In the third case study, I focus on how performances of expertise engaged with a scientific narrative already in circulation, and how nuclear scientists switched between speaking as defence experts at times, and scientific experts at others, in order to legitimise alternative policies towards nuclear testing. In all cases, I reconstruct the ‘problem situation’ that performers of expertise confronted at particular times, and how they navigated them.³⁷ This requires the intensive study of primary sources, including official documents, private correspondence, contemporaneous commentaries such as newspaper articles, memoirs, and oral history interviews. I outline each case below.

³⁷ The term ‘problem situation’ was coined the pragmatist philosopher John Dewey. See Jackson and Nexon (2019), p. 590.

Modernisation theorists and foreign aid for economic development to Latin America

The postwar adoption of national incoming accounting methods by African, Asian, and Latin American countries gave rise to a new interpretation of these regions as ‘underdeveloped’: mired in poverty, but brimming with untapped economic potential. I first examine how performances of expertise by modernisation theorists and their allies problematised ‘underdevelopment’ as a national security risk during the Eisenhower administration, to widespread attention but limited policy success. The two most prominent performers, Walt Rostow and Max Millikan, defined universal ‘stages of growth’ that all economies would pass through en route to advanced industrial capitalism. They claimed that economic growth was failing to keep pace with the ‘revolution of rising expectations’ underway in developing countries. This risked international chaos, which the Soviet Union would take advantage of, unless America provided long-term economic assistance to help these countries achieve ‘self-sustaining growth’ through national development plans.

I then trace how this scientific narrative legitimised the Kennedy administration’s Alliance for Progress, which promised their Latin American ‘partners’ \$1 billion dollars annually in development loans to catalyse their transition to self-sustaining growth. The Alliance’s breathtaking scale and ambition belied its opportunistic origins in the 1960 presidential elections, when Kennedy drew on the scientific narrative of modernisation theory to frame the ‘loss’ of Cuba to Communism as the tragic outcome of Eisenhower’s neglect of Latin American underdevelopment, thereby legitimising his call for a new approach to hemispheric relations. The Alliance failed to meet its own targets for boosting economic growth, and had dissolved by the early 1970s. I suggest that the scientific narrative of modernisation theory contributed to this failure by requiring the US to execute a unilaterally-backed programme through multilateral fora in the spirit of ‘partnership’, which raised significant organisational

and bureaucratic barriers to its success. Its lack of institutional ‘teeth’ also enabled funds to be redirected to serve America’s short-term political objectives in the region.

Rostow and Millikan’s version of modernisation theory is often dismissed as an ‘ideological reflex’ of the Cold War which played no independent part in shaping its course.³⁸ Although the Alliance did not endure, I argue that the scientific narrative which inspired it forged a lasting connection between national security and development overseas, and continues to legitimise American foreign aid as a form of risk management.

Population scientists and population assistance to the developing world

As American leaders came to identify national security with economic progress overseas, a network of population scientists, philanthropists, and campaigners — the so-called ‘population establishment’ — alerted them to a major obstacle to achieving such progress: high fertility.³⁹ This, combined with plummeting death rates, meant that a ‘population explosion’ was underway in the developing world. Aside from holding back economic development, too many people would drive civil unrest and jeopardise global resource supplies. These national security risks could be managed if the US intervened to provide financial, technical, and diplomatic support for programmes to arrest birth rates in developing countries. The scientific narrative of the population explosion thus justified indirect intervention by the US in millions of reproductive decisions around the world.

I analyse how performances of expertise by members of the population establishment skilfully concealed from policymakers the dearth of evidence to substantiate their core claim: that population growth impeded economic development. Although Eisenhower privately

³⁸ Gilman (2003), p. 155.

³⁹ Connelly (2008); Bashford (2014).

endorsed population assistance for this reason in 1958, substantial funding did not commence until the Johnson administration. I argue that Johnson's embrace of population assistance hinged on a performance of expertise by the RAND Corporation economist Stephen Enke. Enke extended the scientific narrative of the population explosion to claim that investing in measures preventing births was a cost-efficient use of foreign aid dollars. During the Nixon-Ford administration, a reactionary faction of the population establishment controlled the production of a National Security Study into the link between US national interests and high population growth overseas. The study legitimised a massive escalation in US government support for population control programmes, even as such programmes attracted increasing criticism from the majority of population establishment figures.

This case demonstrates how translating the scientific narrative of the population explosion into a regime of political practice can be seriously impeded by domestic political factors. The Catholic Church, then the anti-abortion movement, claimed moral authority over the birth control technologies forming the backbone of population control. They argued that it was inappropriate for the US government to intervene in private reproductive choices, and sponsor organisations promoting or performing abortions. As Eisenhower, Johnson, and Reagan needed the support of these coalitions for upcoming elections or other programmes such as the civil rights movement, they were compelled to moderate their support for population assistance.

Nuclear scientists and the nuclear testing debates

The notion of the planet as a single, integrated biosphere is a product of the nuclear age. Research into the global dispersal of radioactive fallout from nuclear testing revealed the inescapable interconnectivity of all lifeforms, habitats, and ecosystems on Earth. The scientific narrative of fallout claimed that continued testing would result in extensive, long-term

damage to the biosphere, even if tests were conducted in isolated locations, and even if nuclear weapons were never used again. It called upon the US government to restrict nuclear testing, ideally via a test ban agreement with the Soviet Union.

Nuclear tests were simultaneously depicted as a national security risk and as a key component of America's defence against national security threats. Participants in the nuclear testing debates had to contend with these contrasting representations. I argue that nuclear scientists were uniquely positioned to do so, as their epistemic authority stemmed from their training as physicists and chemists, and the application of this training to developing the weapons which America used to end World War II. This enabled them to speak as defence experts at times, and scientific experts at others. Performers of expertise switched between these roles in order to influence the Eisenhower administration's approach to nuclear testing, its willingness to limit testing, and then the Senate's ratification of the PTBT during the Kennedy administration.

I first examine two performances of scientific expertise which attempted to legitimise continued testing by portraying fallout as an insignificant risk compared to the threat posed by the Soviet Union. By failing to achieve narrative closure, each instigated a chain of events which further entrenched the scientific narrative of fallout in public discourse. Opponents of a test ban then appropriated this scientific narrative by suggesting that continued testing was needed to develop 'clean' bombs that would result in minimal or no fallout. As Eisenhower's determination to pursue a test ban treaty grew, performances of defence expertise by members of his President's Scientific Advisory Committee (PSAC) paved the way for him take the first tangible steps towards restricting nuclear testing independently of a broader disarmament agreement. By claiming that a treaty was militarily advantageous to America, and a monitoring system to effectively deter clandestine violations was technically feasible, PSAC enabled Eisenhower to counter the argument that a treaty would leave the US

unacceptably vulnerable to the Soviet Union. The latter argument was resurrected by test ban opponents to stoke legislative opposition to the PTBT during the Kennedy administration. Although they secured ‘safeguards’ which committed the US to an aggressive programme of underground testing, Kennedy’s successful mobilisation of pro-test ban nuclear scientists to testify at the congressional hearings preceding ratification helped ensure that the treaty was passed by a large majority.

3. Scientific narratives, national security, and interpretations of danger

David Campbell argues that danger should be studied as ‘an effect of political practices’ rather than ‘the condition of their possibility’.⁴⁰ Analysing representations of danger in the policy documents that defined America’s postwar grand strategy, he notes that their authors were concerned with the specific danger posed by the Soviet Union *and* the general danger of global disorder. The latter appeared as economic malaise, political turmoil, food shortages, population displacement, and disease, among other things. One form of danger required containment; the other, developing a ‘healthy international community’, according to NSC 68, and this was needed ‘even if there were no Soviet threat’.⁴¹ Campbell stopped short of systematically probing the differences between these two kinds of danger or the political practices that effected them.⁴² I think it is useful to treat them as two ideal types: danger as ‘threat’, and danger as ‘risk’. In short, one has to do with agents, the other with phenomena.

⁴⁰ Campbell (1992), p. 18.

⁴¹ Ibid. pp. 25-28. NSC 68 was not the only document which drew this distinction. A 1947 paper by the State Department’s Policy Planning Staff stated that they saw Communists as exploiting, but not the root cause of ‘the difficulties of Western Europe’, which resulted ‘in large part from the disruptive effect of the war on the economic, political, and social structure of Europe and from a profound exhaustion of physical plant and spiritual vigour’. Quoted in *ibid.* p. 26.

⁴² *Writing Security* begins by using the 1991 Gulf War as an example of how US policymakers perceived a country (Iraq) as threatening even when the US was not directly endangered.

Analyses of America's postwar national security policy overwhelmingly focus on danger as threat.⁴³ This is true even when scholars are describing forms of danger that the Soviets exploited, but did not themselves create. The scientific narratives outlined above show how Americans also came to approach national security as risk management. Through them, we can trace the formation of a distinct political rationality characterised by the governance of global problems. We recognise that rationality in contemporary 'global governance' arrangements; we are less cognisant of its roots in American national security doctrine, or how it accentuated the sense of permanent insecurity at the heart of that doctrine, which was largely absent from the calculations of earlier generations of US politicians.

To position the contributions of this thesis in context, I first outline how the occasional need for 'national defence' in America gave way to the relentless pursuit of 'national security'. National security only became widely used in the 1940s. Previously, politicians talked about national defence instead. They understood this to mean a robust response to one-off acts of aggression. The US needed nothing more: it had weak neighbours to the north and south, large bodies of water to the east and west, and an indigenous population that was easily and brutally subdued. Maintaining a state of permanent readiness against attack was the predicament of the geopolitically less fortunate.⁴⁴ Intermittent alarmism over the nation's unpreparedness against foreign invasion remained just that: for most of America's short history, its leaders simply did not regard their country as particularly vulnerable.⁴⁵

⁴³ In a review of the historical literature on national security policy, Leffler defines it as 'the decisions and actions deemed imperative to protect domestic core values from external threats'. Leffler (1990), p. 143.

⁴⁴ Preston (2014).

⁴⁵ Thompson (1992).

‘National security’ was mentioned just four times in presidential speeches between 1914 and 1931.⁴⁶ Its first sustained use was by President Roosevelt as he steered America through the Great Depression. He identified national security as the motivation for the New Deal; only in the late 1930s did he link it to international politics.⁴⁷ To build support for war against the Axis powers, he stoked fears of an attack on US soil, while also portraying Nazi Germany and its allies as a new kind of enemy, one whose worldview made peaceful coexistence with the US impossible.⁴⁸ His rhetoric was complemented by the work of Ivy League academics who fleshed out the meaning of national security. Edward Mead Earle and the Princeton Military Studies Group, for instance, defined it as ‘a state of affairs in which the nation’s territorial domain, political independence, rights, and vital interests are free from any substantial threat of aggression from abroad’.⁴⁹

Their combined efforts yielded a new orthodoxy: security included defending core values as well as territory. As Roosevelt put it to Congress in 1939: ‘There comes a time in the affairs of men when they must prepare to defend not their homes alone but the tenets of faith and humanity on which their churches, their governments, and their very civilisation are founded’.⁵⁰ Thirty years later, as Dean Rusk prepared America to invade Vietnam, he would echo this sentiment: America could only be secure ‘to the extent that our total environment is secure’.⁵¹ As Michael Desch and others have pointed out, statements of this kind have been

⁴⁶ And only as ‘rhetorical flourish’. See Preston (2014), p. 487.

⁴⁷ Ibid. pp. 487-494. The New Deal established a permanent role for government in guaranteeing the socioeconomic security of American citizens. In other words, national security was first used in a domestic political context to refer to the kind of ‘human’ security — freedom from hunger and want — that some IR scholars have subsequently juxtaposed it against.

⁴⁸ Casey (2001).

⁴⁹ Quoted in Preston (2014), p. 495.

⁵⁰ Quoted in Thompson (2005), p. 676.

⁵¹ ‘Excerpts from Rusk Address on U.N.’, 11 January 1964. *The New York Times* (hereafter *NYT*).

a remarkably consistent feature of presidential rhetoric from the Second World War to the present day.⁵²

This was not just talk, either: securing American values meant creating a global order that reflected and embraced them. Efforts proceeded along two fronts: threat mitigation and risk management. National security threats were hostile agents whose mere existence imperilled the United States. By 1946, defence officials determined that the USSR was extremely dangerous, even as their intelligence assessments concluded that a Soviet military attack on America or its allies was very unlikely.⁵³ They overcame this apparent paradox by locating the source of that danger in the very nature of the Soviet system and its animating ideology. After some debate, officials converged on the view that the Soviet Union, like Nazi Germany, was bent on world domination. Whereas Nazi Germany had tried to dominate through brute force, they predicted that the Soviet Union would expand its influence by supporting the power grabs of subservient Communist parties.⁵⁴ Strategies of containment and deterrence evolved to cope with this kind of danger.

National security risks, on the other hand, were a form of danger without intentionality; a danger attached to abstractions. While the consequences of mismanaged risks could be experienced directly, the risks themselves were intangible. They acquired a reality only through representation. A phenomenon like a global food shortage could only be known through what Bruno Latour calls *inscription devices* — charts, models, statistics and so on: ‘by means of inscription, reality is made stable, mobile, comparable and combinable. It is

⁵² For example, in 2005, President George W. Bush said: ‘The survival of liberty in our land increasingly depends on the success of liberty in other lands. The best hope for peace in our world is the expansion of freedom in all the world’. Quoted in Desch (2008), pp. 26-27.

⁵³ Leffler (1984), p. 359.

⁵⁴ Ibid. pp. 365-369.

rendered in a form in which it can be debated and diagnosed'.⁵⁵ Risks, as configurations of conditions that increased the possibility of harm occurring, required ongoing management.⁵⁶ Strategies to govern risk did not aim to debilitate or deter other actors, but to regulate, administer and optimise their environment.⁵⁷

Threat mitigation and risk management were two pathways to national security that were pursued in tandem, but addressed categorically different forms of danger. We need to pay attention to both in order to make sense of US behaviour during the Cold War. As George Kennan wrote in the Long Telegram, Americans may have perceived Soviet-dominated world Communism as a 'malignant parasite'. However, this does not explain how they came to regard the rest of the world as 'diseased tissue' in need of repairing, why they fixated on certain problems or opted for particular solutions.⁵⁸ Risk and threat are clearly interrelated: for example, scientific narratives about the population explosion and underdevelopment emphasised that the Soviet Union would capitalise on mismanaged risks to expand their control and influence at America's expense. But while the Soviet threat was embedded in these narratives, they defined and proposed ways of intervening in risks, not threats. They legitimated the use of the state's resources — its money, its personnel, its technology — to govern abstract entities, Foucauldian 'things', rather than neutralise threatening Others.

⁵⁵ Rose and Miller (1992), p. 185. See also Latour and Woolgar (1986).

⁵⁶ Olaf Corry has made the best attempt I know of to theorise the distinction between threat and risk in IR theory. This definition of risk draws on the one he gives in Corry (2012), p. 248. It is distinct from the colloquial definition of risk as the increased probability of an adverse outcome, and also from Ulrich Beck's notion of the 'risk society'. See Beck (1992).

⁵⁷ For historical overviews of federal government involvement in the sciences, see Isaac (2009); Engerman (2010); Rohde (2015).

⁵⁸ Kennan, 'Telegram to the Secretary of State', 22 February 1946. *Foreign Relations of the United States* (hereafter *FRUS*).

American policymakers' efforts at various forms of threat mitigation during the Cold War are well documented. This thesis contributes to our understanding of how they grappled with danger as risk. When IR scholars explicitly engage with questions of risk management in international politics, most focus on the post-Cold War era and the challenges posed by terrorism, migration, international finance, and environmental degradation.⁵⁹ While these contributions add value, they give the misleading impression that risk is the 'new security', i.e. that policymakers only started thinking in terms of risk after the USSR collapsed. For example, the guest editors of a 2008 special issue of *Security Dialogue* on security and risk claim that 'International Relations scholars concerned with the concept of risk generally trace the notion back to the end of the Cold War, when major states and international organisations such as NATO, the UN and the EU began to refer to their security environment in terms of risks'.⁶⁰

While some of these risks may be new, discourses of danger as risk are not. I argue that, through performances of expertise and the scientific narratives they articulated, America's postwar leaders increasingly came to regard the world as a single entity facing an array of social, economic, and biospheric risks which required management. Risk management was an approach that was distinct from mitigating the threat posed by the Soviet Union and its allies, and just as fundamental to conceptions of national security in the first decades of the Cold War.

⁵⁹ For example, Aradau and van Munster (2007); Kessler and Daase (2008); De Goede (2008); van Munster (2009).

⁶⁰ Aradau et al. (2008), p. 147. No contributing author in this issue deals at length with any topic predating the 1990s.

4. Structure of the thesis

The remaining chapters proceed as follows: Chapter 2 sets out a theory of expertise as an alternative to existing theories of experts in IR. Chapter 3, the methodology, organises the ideas developed in Chapter 2 into a theory that can be investigated empirically. I also discuss my case selection and primary sources. Chapters 4 through 6 are the case studies. Chapter 7 concludes by summarising my argument; explaining its significance for the study of US foreign policy, the study of global governance, and IR theory; and identifying avenues for further research.

2. A theory of expertise

The goal of this thesis is to explain how scientific expertise made it possible for certain problems to be ‘made thinkable and practicable’ as ‘knowable and administrable domains’, thereby shaping the actions of the American state in the early Cold War period.¹ My intention is to illuminate one way in which America’s leaders articulated and practiced preponderant power: as the management of global risks to national security.

One way of doing this would be to write a history of ideas. Indeed, many intellectual historians have engaged extensively with the themes and topics that I address. However, my approach is closer to what Mitchell Dean and others, drawing on Foucault, call an *analytics of government*. Like intellectual histories, analytics of government also concern thought, but as it is ‘embedded within programmes for the direction and reform of conduct’.² It is about ‘thought at work’ or ‘thought in practice’, rather than ‘thought as ideas’. Analytics of government are not bound to a specific methodology, but share an interest in ‘political knowledges’: questions about ‘how to govern, what to govern, who should govern and to what ends’.³

I differ from other analytics of government in two respects. First, I use Erving Goffman’s dramaturgical metaphors: his concept of performance and its disaggregation into front stage, backstage, team, audience, and so on. I draw on Goffman in order to answer a distinctly Foucauldian question because, as Ian Hacking points out, their approaches are complementary. Both men engaged with questions of power by examining discourse.

¹ Rose et al. (2006), p. 86.

² Dean (2010), p. 27.

³ Rose (1999a), p. xiii.

Foucault was interested in constructing a ‘pure description of discursive events’, with the individuals generating and participating in those events ‘present only by implication’.⁴ Hacking calls this a ‘top-down’ approach to discourse. Goffman, by contrast, took a ‘bottom-up’ approach by studying discourse through everyday social exchanges. His conception of social behaviour as performance allows us to trace how ‘discourse is institutionalised and made part of the structure of institutions at work’.⁵ Goffman is under-appreciated as a theorist of power, which he treats as individuals’ practical capacity for action. The strength of his interactional sociology is that it enables us to ‘comprehend the normal, diffuse ubiquity of power while according full recognition to the practices of individuals’.⁶ Adapting it allows me to show how the ‘regimes of intelligibility’ which informed US state behaviour resulted from the efforts of particular individuals. It preserves a place for human agency by acknowledging that ‘things could have been different, save for the impact and implications of certain actions’.⁷ At the same time, it recognises that agency is expressed *through* the roles that people adopt when participating in politics. As Goffman writes: ‘Power of any kind must be clothed in effective means of displaying it, and it will have different effects depending on how it is dramatised’.⁸

Second, I conceptualise the complex of meanings that performers of scientific expertise impart or engage with as *scientific narratives*. A scientific narrative is a story about a global governance object which describes how that object poses a risk to national security, proposes an intervention (or interventions) to manage that risk, and assigns an actor responsibility for that

⁴ Hacking (2004), p. 278.

⁵ Ibid.

⁶ Jenkins (2008), p. 157.

⁷ Jackson (2006), p. 33.

⁸ Goffman (1956), p. 154.

intervention. It is an ideal type, that is, an ‘instrumental oversimplification’ of empirical reality — in this case, what those who perform expertise actually say and do — which facilitates explanation of why an outcome occurred in a particular case.⁹ Scientific narratives conveyed through performances of expertise legitimated particular ways of talking about and acting on global risks. I follow Patrick Jackson in defining *legitimation* as the process of drawing a boundary around an acceptable course of action, making it possible for certain policies to be enacted.¹⁰

Section 1 begins by discussing two prominent theories of scientific experts in IR which start with the actor (i.e. ‘the expert’): Peter Haas’s epistemic community framework, and Bentley Allan’s theory of experts, which adapts securitisation theory. Although these theories draw on competing traditions in constructivist thought, they share deficiencies which limit their explanatory utility. The first relates to the way in which they conceptualise the source of experts’ influence: expert authority is presumed rather than explained, even if the authors of these theories claim to be doing the latter. The second has to do with how that influence is projected, that is, the specific mechanisms that are used to characterise how experts sway decision-makers, such as persuading or threatening. While these mechanisms sometimes serve as adequate descriptions, they do not satisfactorily explain how expertise operates.

My theory starts with the activity instead: it is a theory of expertise, not of experts, and therefore takes a relationalist approach. Relationalism, Jackson and Nexon remind us, ‘is not a *thing*, but more of a broad scholarly commitment to lodge explanatory claims at the meso-level of transactions and processes as opposed to looking to the essential attributes of

⁹ Jackson (2011), p. 142.

¹⁰ Jackson (2006), p. 16. In this thesis, I use ‘legitimation’ and ‘legitimise’ interchangeably; Jackson only uses the former.

individuals or of structural wholes'.¹¹ I argue that people become experts when they engage in performances of expertise and invoke a generally accepted notion of what it means to be a scientist and 'do science', rather than something else. In presenting their message and themselves in a particular manner, they are claiming authority over a specific referent object, and relative to some other person or group. The only way to establish whether they are authoritative or not is to evaluate whether, and to what extent, their audience recognises that claim. Section 2 introduces the conceptual toolkit of dramaturgical action to analyse performances of scientific expertise. Next, I discuss what sets these performances apart from other performances in politics: the anticipatory nature of the claims being made, and the objective manner in which those claims are expressed. I then disaggregate the components of scientific narratives.

In Section 3, I consider how performers of scientific expertise gain access to the *target* of their narratives: the group of people they identify as responsible for intervening to manage national security risks. While a few of the performances analysed in the following empirical chapters were directed at the general public, most took place before executive and legislative policymakers. Belying the narrow question of 'who gets to be in the room', I argue, is a more general one about the relationship between modern government and expertise. The way in which this relationship is configured enables individuals to *capitalise* on their reputation and social ties in order to create specific performance opportunities.

The chapter concludes by addressing the political effects of 'science on stage'.¹² I first explain why scientific narratives might elicit a response from policymakers by suggesting that this is rooted in the way the narrative posits a dissonance between their role identity as guarantors

¹¹ Jackson and Nexon (2019), p. 592. Authors' emphasis.

¹² This phrase is borrowed from Stephen Hilgartner's book *Science on Stage: Expert Advice as Public Drama* (2000).

of national security and the actions taken to affirm that identity. To analyse the effects of a performance of expertise, I propose that we examine the uptake of the narrative it imparts at three levels: policy discourse, policymaking, and policy outcomes. Present at each level are factors that can dampen the effects of a performance. In policy discourse, competing narratives introduced by other stakeholders may predominate. In policymaking, decision-makers may capitulate to countervailing pressures that raise the costs of implementing experts' proposed interventions above the benefits. Finally, in policy outcomes, gatekeepers and bureaucracies may obstruct, delay, or dilute change. Thus, while a scientific narrative makes a certain policy response possible, the extent to which that response is actually realised depends on a variety of additional factors that come together in ways that are unique to each case.¹³

1. Theories of experts

In this section, I consider two major theories of experts in IR from competing traditions in constructivist thought: Haas's epistemic community framework, and Allan's theory of experts, which draws on securitisation theory. Although Allan directly challenges Haas's framework, both draw on a substantialist understanding of social phenomena. This presumes that 'entities precede interaction, or that entities are already entities before they enter into social relations with other entities'.¹⁴ I first explain what I mean by this for each theory, before evaluating the mechanisms they offer to account for how experts influence decision-makers.

¹³ Jackson (2011), p. 114.

¹⁴ Jackson and Nexon (1999), p. 293.

Haas's epistemic community framework remains the best known theory of experts in IR. He defines epistemic communities as 'network[s] of professionals with recognised expertise and competence in a particular domain and an authoritative claim to policy-relevant knowledge within that domain or issue-area'.¹⁵ Members share normative beliefs, causal beliefs, notions of validity, and a common policy enterprise. Conditions of uncertainty grant epistemic communities entry into politics. Their members persuade decision-makers using Habermasian communicative action, and decision-makers learn about new national interests and what policies would advance them. State behaviour changes as decision-makers pursue foreign policies in accordance with their changed beliefs.¹⁶

This theory has two major drawbacks. The first inheres in its substantialist orientation. Epistemic communities are treated as entities that exist 'out there' in the world; they 'have' authority, much like one has hair. It is variation in their attributes, rather than what they do per se, which drives the explanation.¹⁷ For many constructivists, including Haas, the relevant attributes are beliefs. Beliefs are explicitly understood to be 'mental states or events made possible by socially produced and defined categories and meanings'.¹⁸ In practice, however, they are treated as items 'injected' into politics 'as discrete objects which can causally influence other objects e.g. policies'.¹⁹ Thus, epistemic communities offload clusters of beliefs — about

¹⁵ Haas (1992), p. 17.

¹⁶ Ibid. p. 3.

¹⁷ Jackson and Nexon (1999), p. 293.

¹⁸ Laffey and Weldes (1997), p. 206. In the opening and closing articles of the 1992 *International Organisation* volume on epistemic communities, Haas repeatedly refers to the shared, intersubjective nature of their beliefs.

¹⁹ Ibid. p. 207. Conceptualising ideas 'as commodities' was a common feature of mainstream constructivist theorising in the 1990s. A prominent example is Martha Finnemore and Kathryn Sikkink's normative cycles theory. See Finnemore and Sikkink (1998).

cause and effect, appropriate policy responses, and so on — onto politicians, who accept their authority. Variation in these beliefs explains differences in their uptake by policymakers.

As Jackson and Nexon point out, this creates the ‘illusion’ of human agency.²⁰ In epistemic community theory, all of the action between experts and decision-makers ‘takes place *among* them — they provide merely the empty settings within which causation occurs — rather than being generated by them’.²¹ This approach ‘moves all of the crucial explanatory factors into an un-theorised “normative structure”’ — in the case of epistemic community theory, an uncontested, universally valid notion of what constitutes technoscientific knowledge — reducing experts to ‘mere throughputs for specific value orientations’.²² Without these questionable normative claims, the theory cannot explain why certain experts’ claims become the basis for political action, while others do not, or why certain experts more successfully advocate for their claims than others.

The second limitation of epistemic community theory stems from its reliance on communicative action theory. Like other constructivist scholars whose explanations of change hinge on persuasion, Haas draws on Habermas’ theory of communicative action to explain how experts impart beliefs to policymakers.²³ Communicative action proposes that interlocutors ‘try to convince each other to change their causal or principled beliefs in order to reach a reasoned consensus about validity claims’.²⁴ To the extent that participants in a discourse can approximate an ‘ideal speech situation’, interlocutors are ‘open to being

²⁰ Jackson and Nexon (1999), p. 294.

²¹ Emirbayer (1997), p. 286.

²² Jackson, (2006), p. 19.

²³ Adler and Haas cite Habermas’s *Theory of Communicative Action* (1981). See Adler and Haas (1992), p. 389, footnote 53.

²⁴ Risse (2000), p. 7.

persuaded by the better argument' and 'relationship[s]' of power and social hierarchies recede into the background'.²⁵ Haas's proposition that epistemic communities 'influence decision-makers through communicative action' appears to flow from his contention that 'in the wake of a shock or crisis, many of the conditions facilitating a focus on power are absent'.²⁶ Under such circumstances, he concludes, actors will follow a logic of argumentation rather than a logic of consequences.²⁷

This way of modelling experts' activities generates two problems. First, communicative action is not 'an empirically accurate portrait of politics'.²⁸ Circumstances approximating an ideal speech situation rarely arise in reality. Like other actors, experts 'do not leave their identities at the door when entering into dialogue, and they do not employ language unadulterated by earlier political contestation'.²⁹ The epistemic community framework is built on a contradiction: it presupposes that experts possess authority, which allows them access to, and influence over, decision-makers.³⁰ Yet that same authority must drop out of the equation in order for experts to persuade decision-makers to change their beliefs and, thus, policy. It is inconsistent to require that a constitutive feature of an actor be negated in order for them to exert agency, as this implies that the actor is in fact constituted differently.

Second, it is unclear what persuasion actually means. Because we lack direct access to decision-makers' thoughts, we cannot determine whether their beliefs have been revised following an encounter with experts. However, using action (including speech) as evidence of

²⁵ Ibid.

²⁶ Haas (1992), p. 14.

²⁷ Risse (2000) defines a logic of arguing as a subset of a logic of appropriateness, although the exact relationship between the two is unclear.

²⁸ Krebs and Jackson (2007), p. 40.

²⁹ Ibid.

³⁰ Haas (1992), p. 17.

persuasion having taken place is analytically unsustainable, given that it is also taken as evidence for the belief that persuaded the individual in question.³¹ For this reason, the analysis of persuasion ‘critically depends on what scholars consider to be the better argument’.³² In evaluating this, constructivist IR scholars tend to look at whether arguments ‘resonate’ or ‘fit’ with established tropes or concepts.³³ However, the same tropes and concepts can be used by actors in different ways to serve different, even contradictory, purposes. For example, while war is often justified in terms of national security, it is frequently opposed to on the same grounds: its critics argue that national security is in fact undermined by participation in a long, costly conflict that saps attention and resources while gratuitously creating enemies. Without interrogating the process by which actors discursively manufacture ‘resonance’ with dominant ideas in order to advance their agendas, ‘all we have is a consistent pattern of action, or a pattern of action consistent with some particular specification of a norm, with the word “persuasion” tacked on and masquerading as an explanation’.³⁴

Securitisation theory: threatening

Haas asserts that epistemic communities facilitate ‘reflection and understanding’ in the face of ‘power and structure’.³⁵ His theory is informed by a liberal vision of world politics, which holds that ‘the diffusion of the right norms and identities can orient states away from power-political concerns’.³⁶ In contrast, Bentley Allan draws on a tradition of constructivist thought

³¹ Jackson (2006), p. 22.

³² Hanreider (2011), p. 390.

³³ For example, Finnemore and Sikkink (1998), especially pp. 906-907; Keck and Sikkink (1998), especially p. 95. IR scholars often take their cue from the social movements literature, which emphasises frame alignment and frame resonance. See Benford and Snow (1988). This is discussed in Laffey and Weldes (1997).

³⁴ Jackson (2006), p. 22.

³⁵ Haas (1992), p. 7.

³⁶ Jackson and Nexon (2009), p. 925.

in IR that Jackson and Nexon label ‘realist constructivist’.³⁷ Its adherents see power as ‘productive or generative of social and political relations’, and language as ‘a crucial medium, means, locus and object of contest’ which ‘neither competes with nor complements power politics: it *is* power politics’.³⁸

Allan casts scientific experts as rhetorical actors implicated in power struggles. They use language, not just to impart knowledge about the world, but also to act in the world. Using the example of climate scientists, he argues that experts exercise agenda-setting power over foreign policy by selectively highlighting uncertainty about the future consequences of climate change, depicting it as an existential security threat.³⁹ This challenges two key claims of epistemic community theory: that experts reduce uncertainty in policymaking, and that experts influence decision-makers via persuasion.

Allan’s theory moves us beyond simplistic depictions of experts as figures that speak truth to power. However, because his theory is set up in a similar way to epistemic community theory, it reproduces its limitations. Whereas Haas’s theory begins with the actor, it is more apt to say that Allan ‘falls back’ on it. This is because he initially defines expert authority as the object of his inquiry. Referencing Ole Jacob Sending’s work on expertise and recognition, he remarks that ‘actors become authoritative when they differentiate themselves so as to construct and occupy a privileged position in a social-political field’.⁴⁰ Critically, however, he provides no account of the process by which this differentiation is achieved and maintained.

³⁷ Alternatively, ‘constructivism with coercive characteristics’. See Krebs and Jackson (2007); also Jackson and Nexon (2004, 2009).

³⁸ Krebs (2015), p. 1.

³⁹ Allan (2017a).

⁴⁰ Ibid. p. 812. On recognition and expertise in international politics, see Sending (2015). Sending’s work is addressed in detail in Chapter 7.

Instead, he resorts to claiming that decision-makers heed experts' advice because 'they have authoritative access to ideas about nature, humanity and the cosmos'.⁴¹ This means that the explanatory power of his model, when applied to specific cases, is carried by the assumption that whichever group of experts is under consideration already 'has' an authority which is exogenous to his model. Only then are they able to securitise issues successfully.

Allan uses securitisation theory to argue that experts exert agenda-setting influence by constructing 'existential threats', which securitisation theorists take to mean any potential cause of direct harm to a valued referent object, be that a malicious actor or a catastrophic event.⁴² Following the Copenhagen School of securitisation theory, he defines a securitising act as a discursive move in which an actor deploys the 'grammar of security' to remove an issue from the realm of 'normal' politics, justifying 'emergency measures' to combat it.⁴³ When securitising issues, Allan adds that experts draw on *cosmologies*. These bring together 'epistemic claims about the foundations of knowledge and ontological claims about what exists into a narrative that defines the role of humanity in the cosmos'.⁴⁴ In the 1980s, opponents of precautionary measures to tackle climate change invoked ideas of human mastery over nature through technology, while those in favour of preemptive action emphasised the limits to that mastery by 'stressing the high costs of unanticipated changes'.⁴⁵ According to Allan, a pivotal moment occurred during the 1988 Toronto Conference on the Changing Atmosphere. Experts connected cosmological tropes about human fragility to Cold War security discourses,

⁴¹ Allan (2017a), p. 812.

⁴² Corry (2012), p. 246. In other words, securitisation theorists use 'threat' to convey the immediacy of the danger and the causal proximity of the threat, whereas I use 'threat' to refer to forms of danger represented as hostile actors.

⁴³ Ibid. p. 811; see also Buzan et al. (1998).

⁴⁴ Allan (2017a), p. 813.

⁴⁵ Ibid. p. 815.

depicting climate change as a threat ‘second only to nuclear war’.⁴⁶ It is not clear from Allan’s analysis why this framing succeeded in placing climate change on states’ agendas, or why the theme of human fragility proved more compelling than human adaptivity. As with persuasion, all we have is a pattern of activity (a combination of utterances that accord with the grammar of security and play to ‘cosmological’ themes) and an outcome (the securitisation of an issue), but no explanation of how one brings about the other aside from the authority of the speakers.

Moreover, while the contention that experts strategically invoke uncertainty provides a neat counterpoint to epistemic community theory, this dichotomisation is unhelpful. When engaging with policymakers, experts employ a variety of tactics and techniques that includes manufacturing uncertainty, but is not reducible to it. Manufacturing uncertainty in a performance of expertise is likely to attract attention by unsettling an audience. Alone, however, it offers no clear path forward, and can create a window of opportunity for others to introduce competing narratives. For example, a 1956 study by the National Academy of Sciences into the Biological Effects of Atomic Radiation indicated that radioactive fallout could cause profound damage to the biosphere, but concluded that the nature or extent of that damage was highly uncertain. The Eisenhower administration hoped that the report would reign in public controversy over fallout, but it had the opposite effect.⁴⁷ In fact, the first clear articulations of the scientific narrative of fallout appeared as responses to the report.

2. Scientific expertise as performance

Insofar as the theories of experts discussed above attend to what experts actually do, their activity is first reduced to utterances, and then to a specific pattern of utterance —

⁴⁶ Ibid.

⁴⁷ Hamblin (2007).

‘persuading’ or ‘threatening’. Expertise is often conveyed through language, but it is more than rhetoric. It relies on artefacts such as reports, diagrams, and images. It typically requires several people working together to steer an audience towards a desired outcome. While doing so, these people are trying to foster the impression that they are trustworthy, credible, and deserving of attention. The rest of this section develops the notion that scientific expertise is, above all, *dramatic*. It is an effect that is created through action, rather than something a person possesses. In other words, I treat epistemic authority as an accomplishment of practice. Below, I introduce the conceptual toolkit of dramaturgical action. I then discuss the conventions which constitute performances of scientific expertise and distinguish them from other roles in politics, and break down the different components of scientific narratives.

Dramaturgical action

Goffman’s dramaturgical approach is situated in the ‘broad landscape’ of symbolic interactionism: a tradition of social inquiry which models societies as ‘negotiated orders’, and treats individuals as creative agents who are embedded in social situations, and can reflexively adapt to them.⁴⁸ Individuals participate in politics as citizens, voters, lobbyists, officials, presidents, and so on. They are expected to play their parts — to perform these *roles* — convincingly, much like actors on stage. Doing so both enables and constrains action: a president can do many things an ordinary citizen cannot, but has far greater responsibilities to fulfil, and far higher expectations to meet. An expert is a part to play in the theatre of politics, existing only in relation to other roles: professional scientists adopt the persona of ‘an expert’ when speaking to audiences of laypeople.

⁴⁸ Adler-Nissen (2016), p. 28; Hall (1972), p. 35. Goffman was inspired by theorists of symbolic interaction, like G. H. Mead, and made explicit reference to their work in his research on performance and self-presentation.

Performances are self-aware, often collaborative, exercises in impression management whose purpose is to convey a set of meanings to an audience.⁴⁹ Goffman equips us with a useful set of concepts to dissect performances, including performances of scientific expertise.⁵⁰ Foremost, all performances take place before an *audience*. Often, the audience and the target of the scientific narrative will be the same: that is, experts perform before the people they identify as responsible for intervening to manage a risk. On other occasions, performances of expertise will be directed at a constituency that matters to the target.⁵¹ This could be to elicit a response from the target: for example, throughout the late 1950s, the chemist Linus Pauling gave speeches, wrote editorials, and participated in television debates about the risks of fallout, hoping that increased public awareness would pressure the Eisenhower administration into restricting nuclear testing.⁵² It could also be to counteract a scientific narrative already in circulation: for example, AEC Commissioner Willard Libby attempted to soothe public anxieties over fallout so that the Eisenhower administration could continue with its testing programme.

Performers usually work in *teams* to convey an overall impression for an audience, with each team member undertaking a specialised part. Some team members will have *dramatic dominance*, meaning they ‘are more central to the performance...[and their] actions constitute a greater portion of the substance of the performance’.⁵³ Others will have *directive dominance*, which Goffman defines as ‘the right to direct and control the progress of the dramatic

⁴⁹ Tilly (2008), pp. 14-15.

⁵⁰ Notable applications of his dramaturgical approach in IR include Schimmelfennig (2002); Salter (2008); Adler-Nissen (2014); Hall (2015); Kranke (2020).

⁵¹ Why this constituency might matter to the target is discussed in Section 4.

⁵² See Hager (1995), Chapter 19.

⁵³ Goffman (1956), p. 97.

action’.⁵⁴ This includes creating the circumstances that allow performances to take place, for example by arranging meetings between individuals, or by ensuring that certain documents are passed into certain hands. Occasionally, the same person will have both dramatic and directive dominance.

In performances of expertise, it is rare for teams to consist exclusively of professional scientists. Karen Litfin highlights the importance of *knowledge brokers* who interface between the academic and political worlds.⁵⁵ They play a key part in creating performance opportunities by leveraging their access to decision-makers, whom they may serve as special advisors or assistants. Examples of knowledge brokers include James Killian, who was president of the Massachusetts Institute of Technology (MIT) before becoming Eisenhower’s Special Assistant for Science and Technology; and C.D. Jackson, a media executive who was Eisenhower’s Special Assistant for International Affairs. Knowledge brokers often direct performances, but can also play a dramatic role, for example as a compère, who builds a rapport with the audience and introduces the other performers; or an interpreter, who explains to the audience in terms such that they can easily understand what is happening on stage. Other parts in a performance of expertise could include the savant, who is never seen, but whose name and ideas are invoked by others when they want to drive home an important point; a virtuoso, called in to stun the audience with feats of technical prowess; and a shill, a performer disguised as a member of the audience, whose job it is to rouse support for those on stage.

⁵⁴ Ibid.

⁵⁵ See Litfin (1994). Knowledge brokers play a similar role to policy ‘entrepreneurs’, ‘advocates’, or ‘brokers’ in the policy process literature. See Cobb and Elder (1983); Sabatier and Jenkins-Smith (1993); Baumgartner and Jones (2009); Kingdon (2013), pp. 122-125.

Goffman's distinction between *front stage* and *backstage* highlights the 'dialectic of self-revelation and concealment' that performers engage in.⁵⁶ Each is a tightly bounded *region* characterised by different behaviours. The front stage is where the performance is delivered, while the back is 'where the impression fostered by the audience is knowingly contradicted as a matter of course...it is here that illusions and impressions are openly constructed'.⁵⁷ Interpersonal encounters, for example at a Senate committee hearing, as well as textual artefacts such as reports can be analysed as fronts. *Stage management* controls the flow of information from back to front stage, pruning performances of inconsistencies and discrepancies to achieve *closure*: the temporary stabilisation of a set of claims, or what Goffman would call fixing 'the definition of the situation'.⁵⁸

Hans Joas reminds us that 'every action takes place in a situation', and that, in order to act, 'the actor must pass judgement on the nature of the situation'.⁵⁹ A democracy like the United States offers multiple points of entry into the foreign policy process, and therefore a range of **performance of opportunities**. The separation of powers between the executive, the legislature, and the judiciary means that policy-relevant decisions are often made in several locations.⁶⁰ For example, while treaties are negotiated by the executive, they only enter into force following ratification by the Senate. A relatively porous set of institutions creates a range of stages for performers to appear on. Each one structures action differently. How so is an empirical question for the researcher. That said, some basic distinctions can be made.

⁵⁶ Hilgartner (2000), p. 11.

⁵⁷ Goffman (1956), p. 69.

⁵⁸ Goffman (1956), p. 3. The concept 'stage management' comes from Hilgartner (2000), pp. 11-12. He draws directly on Goffman. For more on enclosure and disclosure, see Pinch and Bijker (1984).

⁵⁹ Joas (1996), p. 160.

⁶⁰ Baumgartner and Jones (2009), p. 32.

One important source of variation is whether the performance is embodied or not. When performers are physically present before their audiences, there is likely to be some interaction between them. At congressional hearings, for instance, expert witnesses are invited to testify, then answer questions from committee members. If audience members can freely interject, or if the performance takes place during a meeting where other topics are discussed, the performer may lose control over the proceedings. Goffman focused on embodied performances, but, as Stephen Hilgartner argues, text is also performative, and is therefore amenable to dramaturgical analysis. Reports, letters, and articles are important instruments of self-presentation used by experts.⁶¹ When performances of expertise are primarily or wholly textual, knowledge brokers who collaborate with experts may play a crucial role in stage management. They ensure that the right documents reach key decision makers, or are surfaced in closed meetings, such as those of the National Security Council. They may also embellish the original document with covering memoranda that highlight, or even exaggerate, the conclusions supporting their favoured policy agenda.

A second source of variation is the extent to which the performance is structured according to formal rules. Highly ritualised encounters like congressional hearings proceed differently from open-ended discussions in closed-group sessions, for example between members of a task force, advisory group or committee. The greater the number of rules governing the performance, the less room there is for improvisation or spontaneous change. While performances occurring under stricter conditions are not automatically less effective, performers in highly formal settings can expect to incur greater audience penalties if their performance deviates from their roles. In a private conversation with a senior politician, an expert might disclose opinions about a particular policy option that go beyond scientific

⁶¹ Hilgartner (2000), pp. 16-20.

advice. If she or he does so while testifying, or in a final report, she or he is more likely to be admonished.

Scientific expertise as objective anticipation

The concepts introduced above can also be applied to other kinds of expertise as well. For example, in Chapter 6, I show how members of the President’s Scientific Advisory Committee practiced stage management in their performances of defence expertise before policymakers. Below, I consider what sets performances of scientific expertise apart from other performances in contemporary politics.

The role of the scientific expert has emerged over time from what STS scholars call *boundary work*: the ‘attribution of selected characteristics to the institution of science (i.e., to its practitioners, methods, stock of knowledge, values and work organisation) for purposes of constructing a social boundary that distinguishes some intellectual activities as “non-science”’.⁶² The boundary between ‘scientific’ and ‘non-scientific’ activity is ever-shifting. For example, the classification of humanity into a genetically-layered hierarchy of races was considered ‘scientific’ until the end of World War II. Today, race is almost universally treated as a social rather than a biological fact; no scientific expert can publicly invoke the latter understanding of race in an explanation and hope to be taken seriously — that is, recognised — as a scientific expert.⁶³

In the short run, boundary work yields ‘temporary, localised agreements’ about the distinction between science and non-science.⁶⁴ *Boundary maintenance* is when an actor practices this

⁶² Gieryn (1983), p. 782.

⁶³ See Gould (1981).

⁶⁴ Gomez-Morales (2015).

distinction in her or his performance of expertise. Boundaries are reproduced by conventions, which can be viewed as codifications of shared expectations about roles. They are relatively stable scripts or behaviours that the audience expects conformity to. Practicing adherence to them invites the audience to recognise the performer as a scientific expert, and that recognition enables a performer to wield influence: a form of non-coercive power that emerges out of social interactions, through particular practices.⁶⁵

Performances of scientific expertise are structured by two conventions. First, they are *anticipatory* in nature: they claim to know something about the future of a governance object and how to shape that future.⁶⁶ This sets them apart from other performances of expertise, such as defence expertise (knowledge of how to defend a collectivity against external threats) or bioethical expertise (knowledge of how to navigate ethical quandaries in the life sciences).⁶⁷ Second, they express that claim *objectively*: performers create the impression that their interest in a set of policy interventions derives solely from their knowledge of that object.

Let me unpack each of these statements. Scientific expertise is future-oriented. So were some pre-modern forms of expertise: past rulers often consulted astrologers, prophets, and oracles.⁶⁸ But instead of surrendering to the future, scientific expertise anticipates it in order to redirect its course.⁶⁹ In addition, the kind of future envisaged does not concern ‘the lives of specific individuals and groups of people’, but rather abstract entities — ‘things’ — like the

⁶⁵ Adler-Nissen and Pouliot (2014), pp. 893-894. These authors introduced the concept ‘emergent power’.

⁶⁶ Anticipatory forms of knowledge and governance have received substantial attention from anthropologists, sociologists, and STS scholars. For example, Nelson et al. (2008); Guston (2014). More recently, IR scholars have begun to investigate these themes. See Berten and Kranke (2022).

⁶⁷ See Littoz-Monnet (2020) on bioethical expertise.

⁶⁸ See Raphals (2013); Santangelo (2013).

⁶⁹ Anticipation is an attempt to ‘capture, seize, take in, or take possession of something beforehand or in advance of’. Anderson (2010), p. 229.

biosphere.⁷⁰ The case study chapters that follow detail the practices which generated anticipatory knowledge about national economies, populations, and the biosphere. For now, I note two broad historical shifts which account for the general ascendance of anticipatory knowledge. By the late 19th century, models of deterministic causation were replaced with probabilistic and statistical thinking.⁷¹ An indeterminate future opened up possibilities for present intervention.⁷² The imperative to intervene, meanwhile, stemmed from ‘the governmentalisation of the state’: the gradual reconfiguration of political rule towards managing ‘the welfare of the population, the improvement of its condition, the increase of its wealth, longevity, health’.⁷³ Anticipatory forms of knowledge are valuable to governments which administrate abstract ‘things’ because those things can only be optimised by reference to some desired (or undesired) future state.⁷⁴

Second, scientific expertise projects an aura of objectivity.⁷⁵ Ideally, performers do not reveal their feelings, their politics, or their ethics on stage: their narratives ‘bear no trace’ of themselves as narrating subjects — except to present themselves as ‘truth-seekers’.⁷⁶ ‘Truth’ here does not mean ‘a timeless truth inscribed in the world or in reason’ but a *norm* of constituting scientific objects by ‘formulating, through propositions capable of being combined integrally, a theory controlled by the concern with proving itself wrong’.⁷⁷ STS

⁷⁰ Adam (2010), p. 365.

⁷¹ Hacking (1990); Porter (1986).

⁷² ‘The greater the level of indeterminism in our conception of the world and of people, the higher the expected level of control’. Hacking (1990), p. vii.

⁷³ Foucault (2007), p. 144; Foucault (1991), p. 100.

⁷⁴ See Beckert (2013).

⁷⁵ The history of objectivity, its connection to scientific practice, and its various ‘cultures’ is taken up in Daston and Galison (2007). Here, I adopt what Theodore Porter would call a ‘weak’ philosophical conception of objectivity as ‘the exclusion of judgment, the struggle against subjectivity’. Porter (1995), p. ix.

⁷⁶ Daston and Galison (2007), p. 17.

⁷⁷ Rose (1998), p. 160. Rose draws on the work of the French philosopher Georges Canguilhem.

scholars have repeatedly shown that scientific research strays from this norm.⁷⁸ As Karin Knorr-Cetina argues, the relationship between inquiry and conclusions in scientific practice are circular rather than linear. Using the example of experimental processes in molecular genetics, she shows how ‘to obtain a desired outcome one needs to optimise the method of achieving a result, but to optimise the method one needs to know the outcome of the work in advance’.⁷⁹ Epistemic community theory has erred in conflating the self-presentation of scientific experts with reality by accepting that their policy recommendations flow directly from their shared principled and causal beliefs, underpinned by their shared standards for validating knowledge, rather than from their attempts at manufacturing the *appearance* of such.⁸⁰ A category of practice — the calculated self-presentation of experts as dispassionate truth-seekers — has been uncritically adopted as a category of analysis.⁸¹

What practices help to sustain an impression of objectivity? A simple but often-used strategy used by performers of scientific expertise is to remind lay audiences that they are offering a ‘technical’ analysis of a problem, are ‘just stating the facts’, or that they will refrain from discussing certain issues because that is ‘outside the scope of their expertise’. Effective stage management is crucial, too, as it conceals from audiences ‘the entire social history of actions and decisions, experiments and arguments, claims and counterclaims — often enough, a *disorderly* history of contingency, controversy and uncertainty’ behind their scientific

⁷⁸ See Latour and Woolgar (1986).

⁷⁹ Knorr-Cetina (1991), pp. 108-109. Her example describes gel electrophoresis: a technique for separating DNA and RNA fragments by length, which involves exposing X-ray film to a gel. This returns a matrix of white and black bands. To obtain high quality results, the bands of interest must be placed in the middle of the matrix, and the electrical current that is passed through the gel must be stopped once those bands appear. This requires identifying what the bands of interest are and estimating their length ahead of the experiment.

⁸⁰ Haas (1992), p. 20.

⁸¹ Brubaker (2004), p. 8.

narratives.⁸² Finally, quantification — the representation of knowledge claims in numeric terms — is also widely utilised. Numbers are ‘synonymous with rigour and universality’: they pin down ever-shifting realities, like the annual value generated by an economy, and permit them to be discussed by individuals with little knowledge of their intricacies, in a way that appears untainted by emotion or bias.⁸³ In Theodore Porter’s elegant phrasing, quantification is ‘a way of making decisions without seeming to decide’.⁸⁴

Performers of scientific expertise are not automatons executing a predetermined series of instructions: they have significant room to creatively apply the conventions that constitute their role and reproduce the boundaries between different roles. That said, radically departing from convention can compromise a performance’s credibility and cogency. For example, early calls by some nuclear scientists to regulate the development of nuclear weapons highlighted the moral implications of their enormous destructive potential. Allowing bigger bombs to be built and used was profoundly inhumane, for they would ‘slaughter a vast number of civilians’ and ‘might become a weapon of genocide’.⁸⁵ Such arguments were publicly dismissed by officials as inappropriate, given scientists’ roles as technical advisors. This was highlighted by the character assassination of Robert Oppenheimer by the AEC, whose Personnel Security Board reminded policymakers to ensure that ‘the advice which they seriously seek appropriately reflects special competence...uncoloured and uninfluenced by considerations of an emotional character’, and to treat scientific advice on ‘moral, military

⁸² Epstein (1996), p. 28. Author’s emphasis.

⁸³ Porter (1995), p. ix.

⁸⁴ Porter (19

⁸⁵ This is how the General Advisory Committee of the Atomic Energy Commission phrased their recommendation against developing the hydrogen bomb. Quoted in Rubinson (2018), p. 46. For the moral arguments of nuclear scientists, see *ibid.*; Badash (2005); Bridger (2015).

and political issues' with caution.⁸⁶ In subsequent attempts to influence policy, nuclear scientists focussed instead on assessing the national security risks of fallout, whether a test ban treaty could be adequately monitored, and whether concluding one would leave America at a military disadvantage relative to the Soviet Union.

Scientific narratives

A scientific narrative articulates a risk (or risks) that a global governance object poses to national security, and proposes corrective measures that policymakers can take to manage those risks. It draws a boundary around a particular course of action and defines it as acceptable, a process Jackson calls *legitimation*. Acts of legitimation and actors are mutually constitutive: 'by limiting action, [boundaries] produce an actor, demarcating a sphere in which that actor can legitimately act'.⁸⁷ This is a vital point: it means that as a scientific narrative is being articulated, several things are happening simultaneously. In defining a governance object in a certain way and weaving together a story about its trajectory, performers of expertise stake a claim to epistemic authority over that object, while delegitimising competing claims. Their narrative also implicates policymakers (or a subset thereof) in managing the risk that object (or some aspect of it) poses, and legitimates the allocation of state resources to intervene in that object. In accepting this narrative, policymakers also redraw the boundaries of their role to include that object.

Of course, reality is not quite so simple. The audience may accept some aspects of the narrative while rejecting others. The stabilisation or closure that a given scientific narrative achieves is always temporary. It can be contested, amended, or undone by future transactions

⁸⁶ United States Atomic Energy Commission (1954), p. 18.

⁸⁷ Jackson (2006), pp. 24-25.

(regardless of whether those transactions are instigated by experts or by others). Once a scientific narrative is in general circulation within a political community, others, including other experts, can appropriate one or more elements of the original narrative and fold it into a new one. In doing so, they stake out an alternative claim to authority, and draw the boundaries of permissible action differently. This is discussed further in Section 4.

We can assess the resilience of the boundary that a given narrative draws around a particular course of action by tracing its impact over time on political discourse and practice. A schema for doing so is proposed in Section 4. The rest of this section describes the five parts of a scientific narrative: scaling a global governance object, anticipating an undesirable but avoidable future for it, proposing an intervention(s) to manage the risk(s) to national security, assigning an actor responsibility for intervening, and, optionally, identifying an opportunistic enemy ready to exploit an undesirable future. Performers of expertise are unlikely to think of themselves as moving sequentially through these acts. However, breaking down the message conveyed by a performance in this way allows us to compare different narratives, assess how performers change their narratives over time, and how they incorporate or modify elements of narratives that are already in circulation.

Scaling a global governance object. Scientific narratives indicate how populations, economies, ecologies, etcetera, should be governed. This only becomes possible ‘through discursive mechanisms that represent the domain to be governed as an intelligible field with specifiable limits and particular characteristics, and whose component parts are linked together in some more or less systematic manner by forces, attractions and coexistences’.⁸⁸ Global governance scholars have introduced the concept of *global governance objects* to highlight

⁸⁸ Rose (1999), p. 33.

how entities like the economy are constructed discursively rather than possessing an objective existence, and how those entities organise political activity.⁸⁹ Missing from their analyses, however, is attention to the processes by which governance objects are *scaled up* from historically specific data and events.

According to Anna Tsing, scale is ‘the dimensionality necessary for a particular kind of view’, be that ‘microscopic or planetary’.⁹⁰ Scale is the level at which governance objects are rendered, understood, and acted on; successful scale-making projects enable new forms and practices of governance. For example, the idea of a ‘national economy’ is an invention of the 1930s, when the first national income accounts were produced for the United States. Examining similar data from Europe, John Maynard Keynes and others distilled a set of law-like relationships and correlations between interest rates, investment, employment, output, and aggregate demand.⁹¹ Equations, diagrams, and models brought the economy into view as ‘a constellation of such interrelationships within a closed system whose boundary was the nation-state’.⁹² This new aggregation inspired a vast enterprise to harvest and analyse data; this data, once ‘congealed’ into indicators such as GDP or the inflation rate, enabled new kinds of conversation about the overall health of the economy, as well as policy interventions to optimise its functioning.⁹³ All this gave the national economy the appearance of an object that stood apart from state and from society, governed by the former in the interests of the later.⁹⁴

⁸⁹ See Corry (2013); Allan (2017b).

⁹⁰ Tsing (2005), p. 58.

⁹¹ Mitchell (1998).

⁹² Murphy (2017), p. 18. Murphy takes this argument further, suggesting that entities like population and the economy have an affective quality.

⁹³ Ibid.

⁹⁴ See also Mitchell (2002).

Far from being ‘a neutral frame for viewing the world’, scales are ‘brought into being: proposed, practiced, and evaded, as well as taken for granted’.⁹⁵ Scales sanction certain types of analysis and advocacy while delegitimising or obscuring others.⁹⁶ For example, the national scale of the economy omitted household labour and production, subsistence agriculture, bartering, and cross-border flows of people and goods.⁹⁷

There are at least two ways in which the global scale is rendered. The first is as a world populated by commensurable units. For example, the global diffusion of national income accounting standards helped transform national economies into global governance objects by allowing countries as different as Mongolia and Mauritius to be represented using a standard set of statistical aggregates. As I discuss in Chapter 4, Walt Rostow and Max Millikan furthered this process of objectification by abstracting from Western European history three stages of development which all economies would progress through. Countries languishing at an earlier stage were therefore amenable to the same kinds of external intervention to accelerate their economic development.

The second rendering of the global scale is that of ‘an entire planet [as] a single unit or system’.⁹⁸ For example, in the 1950s, the biosphere was constituted as a global governance object as researchers followed the journey of radioactive particles through the atmosphere, the food chain, and the oceans. The discovery that fallout from nuclear tests conducted in remote Pacific islands could alter other ecologies eroded the notion that planet Earth consisted of discrete, self-contained ecosystems.⁹⁹ This global scale is in operation when challenges faced

⁹⁵ Tsing (2005), p. 58.

⁹⁶ Tsing (2000), p. 331.

⁹⁷ See Mitchell (1998).

⁹⁸ Masco (2014), p. 44.

⁹⁹ Jessee (2013), p. 268; see also Masco (2014), p. 52.

in one part of the world are interpreted as the consequences of occurrences elsewhere: for instance, when floods or hurricanes are thought to be exacerbated by global warming, or an economic recession in one country is attributed to the collapse of the housing market in another. This understanding invites novel responses that may implicate actors and processes far removed from the immediate crisis: calls to restrict carbon dioxide emissions, for example, or for better supervision and regulation of the financial sector.

Anticipating an undesirable, but avoidable future. Next, the global governance object is problematised by forecasting an undesirable future for it, which poses a risk (or risks) to national security. This can be achieved using what Mallard and Lakoff term *techniques of prospection*: ‘a set of practices for envisioning an unknown future’.¹⁰⁰ These techniques often generate artefacts, like models or projections, to demonstrate how a governance object will change over time. For example, climate scientists often use maps to visualise how global warming will impact average temperatures around the world. Techniques of prospection have several effects on audiences. They inform them by converting an unknown uncertainty into a known risk.¹⁰¹ They orient them by locating them temporally, at a crucial juncture in history. Finally, they empower them by identifying opportunities to intervene in order to alter the future in their favour.

In order to mobilise political action, the techniques of prospection used in performances of expertise generally anticipate an undesirable future. If they suggest that everything will be fine, nothing needs to be done. At the same time, apocalyptic scenarios are debilitating because they leave no room for agency: issues are consigned to ‘the realm of fate’.¹⁰²

¹⁰⁰ Mallard and Lakoff (2011), p. 339.

¹⁰¹ Ibid. p. 340.

¹⁰² Stone (1989).

Techniques of prospection conjure up dystopian futures that can be avoided by taking action in the present. By distilling a complex reality into a few key variables, they make dystopian futures *legible*: knowable and calculable and, therefore, amenable to intervention.¹⁰³ For example, population scientists used demographic transition theory to predict an exponential increase in developing countries' populations as death rates there plummeted, while birth rates remained constant and high. Left unattended, this 'population explosion' would impede economic development, impoverishing countries and rendering them more vulnerable to Communist subversion. This could be avoided by lowering fertility through national population control programmes.

Techniques of prospection can be formulated and/or used in misleading ways. In evaluating them, it is important to not only interrogate the technique itself, but also the surrounding context. For example, a well-known 1958 study by Ansley Coale and Edgar Hoover estimated the impact of fertility levels on per capita income in India and Mexico. This study was widely misrepresented by advocates of international population assistance as proof that high population growth impeded economic development. In fact, as Coale later clarified, 'our conclusion indicated significant prospective economic progress even with continued high fertility'.¹⁰⁴

Proposing an intervention to manage the risk (or risks). The next stage is to propose an intervention(s) to manage the national security risk, or risks, posed by the global governance object. Interventions consist of *technologies* and *policies*. Technologies are methods, skills, and techniques that accomplish a particular objective. They usually combine material and non-material elements. For instance, birth control technology refers to intra-uterine

¹⁰³ On legibility, see Scott (1999).

¹⁰⁴ Coale (2000), p. 37.

devices, sterilisation, condoms, contraceptive implants and pills, but also to the host of clinical, health and educational practices via which these objects operate on women's bodies.

Technologies are embedded in policies: programmatic statements that establish a set of objectives and the means of achieving them. Policies often specify targets or metrics to measure progress against those objectives. In IR, they are primarily seen in functional terms: as instruments that institutions use to coordinate activity and determine how resources are allocated. However, they are also symbolic devices. A policy makes a particular course of action legible by 'locating specific programmes within broader spheres of political value, as well as erasing and obscuring alternatives'.¹⁰⁵

Identifying an actor as responsible for intervening. Some securitisation theorists claim that merely designating an issue a national security threat is enough to trigger a political response.¹⁰⁶ Designation is only one part of the story; implication is the other. A scientific narrative assigns an actor responsibility for intervening to manage the risk a governance object poses to the security of a given collectivity. This actor is the *target* of the narrative, who, in the performances of expertise I examine, are typically also the audience of the performance. Scientific narratives rarely target specific individuals, but instead implicate a general category of people who have the power to intervene. Thus, scientific narratives that aim to shape foreign policy will target key decision-makers in government. This would usually be the president and cabinet, but may also include legislators if their support is needed to enact a particular policy. Scientific narratives construct a discrepancy between the role identity of

¹⁰⁵ Tate (2020), p. 86.

¹⁰⁶ These theorists, who are associated with the Copenhagen School, take what Balzacq calls a 'philosophical' approach to securitisation, which sees it principally as a speech act. Balzacq contrasts this with the 'sociological' approach to speech act theory, which understands it 'in terms of practices, context, and power relations that characterise the construction of threat images'. Balzacq (2011), p. 1.

their target and the actions that reproduce and sustain that identity. I expand on why this has a causal effect in Section 4.

Identifying an opportunistic enemy. Although not an essential component of a scientific narrative, justification for intervention can be bolstered by identifying an enemy who is waiting to exploit an undesirable future. If included, this element connects a scientific narrative to discourses of danger as threat in circulation at the time. Who the enemy is depends on the historical context; the character of that enmity also determines how the enemy image can be leveraged in scientific narratives.

During the Cold War, the USSR was America's principal opponent.¹⁰⁷ Bipolarity made the superpowers 'enemies by position', as Waltz puts it, as 'each [could] damage the other to an extent that no other state [could] match'.¹⁰⁸ However, they were also enemies by disposition. In the late 1940s, US policymakers converged on the view that the USSR was expansionist by nature, although their analyses of why differed.¹⁰⁹ This perception remained relatively stable from Truman until 1985, even as various administrations also pursued dialogue and cooperation with the Soviets on issues such as nuclear arms control.¹¹⁰

Structural and dispositional enmity of this kind encouraged a paranoid, zero-sum view of the world: the US could not afford to cede ground on any issue, anywhere, as doing so opened

¹⁰⁷ Changing American representations of the Soviet threat have received extensive academic treatment. See, for example, Mark (1989); Campbell (1991); Shimko (1991).

¹⁰⁸ Waltz (1964), p. 882.

¹⁰⁹ For example, George Kennan's 'Long Telegram' rooted Soviet expansionism in Communist ideology's intolerance of capitalism. NSC 68 instead argued that the Kremlin's aspirations for absolute power required 'the complete subversion or forcible destruction of the machinery of government and structure of society in the countries of the non-Soviet world and their replacement by an apparatus and structure subservient to and controlled from the Kremlin'. 'NSC 68: United States Objectives and Programs for National Security', 14 April 1950. Wilson Centre Digital Archive; see also Gaddis (2005), Chapter 2.

¹¹⁰ Containment and détente are sometimes treated as categorically similar and mutually exclusive. This is inaccurate: containment was a strategy, an alternative to rollback, while détente refers to several periods during the Cold War where superpower relations improved.

up opportunities that the USSR could and would exploit. It also suggested that the Soviets could not be taken at face value: even in areas where they professed common interests with the US, such as avoidance of mutually assured destruction, they would always look for ways to gain the upper hand. Invoking the spectres of Soviet expansionism and untrustworthiness added valuable ammunition to Cold War scientific narratives. For instance, the opponents of a test ban treaty stressed the need for an infallible nuclear test detection system by claiming that the Soviets would inevitably exploit any technical deficiency to run clandestine tests and further develop their nuclear weapons capabilities.

3. On ‘access’

I now consider the issue of accessing key decision-makers. I want to focus on this for two reasons. First, it is manifestly not the case that ‘just anyone’ can perform expertise, but advancing a theory of expertise rather than experts risks creating this impression unless the matter of access is addressed explicitly. Second, I would like to do so in a non-reductive fashion. Belying the narrow question of ‘who gets to be in the room’ is a more general one about the relationship between modern government and expertise. The way in which this relationship is configured enables particular individuals to capitalise on their reputation and social ties to create performance opportunities.

Who gets access to decision-makers, and on what terms, is an intense game that involves deploying two forms of capital coined by Pierre Bourdieu: *social capital*, the ‘networks of acquaintance and recognition’ that are leveraged to ensure performers are in the right place at the right time, and *cultural capital*, the reputation for competence in a given field that

precedes performers and suggests to their audience that they are worth paying attention to.¹¹¹ To a degree, the two kinds of capital can compensate for each other: a relatively unknown figure (or one held in contempt by her peers) could gain access to a pivotal audience if supported by an well-connected insider, and, conversely, an eminent recluse might be invited to give an opinion on the strength of her reputation alone.

Neither form of capital, however, determines the outcome of a performance. Nor does the general propensity of a leader to heed expert advice. For example, Eisenhower's relationship with experts is often contrasted with Kennedy's affinity for 'action intellectuals' like Walt Rostow and McGeorge Bundy.¹¹² As Eisenhower left office, he famously warned that public policy risked becoming 'captive of a scientific technological elite'.¹¹³ Yet, like his successor, he maintained an extensive network of informal contacts with members of that elite. He enjoyed close friendships with experts whose views he ultimately chose to disregard, such as the scientist Isidor Rabi over arms control. And he was swayed by experts he did not especially like, such as Edward Teller, whose warnings about the vulnerabilities of a test ban monitoring system dissuaded Eisenhower from pursuing a test ban agreement with the Soviet Union for several years. Performers' social and cultural capital matters, but the effects of performances of expertise cannot be reduced to them. What happens in the room is also important.

What makes those forms of capital significant in political transactions is the intrinsic link between modern government and expertise. Conventional analyses of 'non-state actors' in IR, such as advocacy networks and epistemic communities, start from the assumption that

¹¹¹ This adapts (and simplifies) Bourdieu's notions of social and cultural capital as described in Bourdieu (1986). The quoted text is from Goldthorpe (2007).

¹¹² Dumbrell (2014). For a well-known account of action intellectuals, see Halberstam (1972).

¹¹³ Eisenhower, 'Farewell Address', 17 January 1961. Dwight D. Eisenhower Presidential Library (hereafter Eisenhower Presidential Library).

‘state’ and ‘society’ (or some subset thereof, like scientists or corporations) are distinct entities.¹¹⁴ The researcher’s objective, broadly construed, is to evaluate the nature and extent of the influence that one exerts over the other. Up close, however, this distinction blurs and shifts. During and after World War II, the American government poured federal funds into scientific research at an unprecedented pace. Many scientists worked on government projects, and were employed at institutions that were partially or wholly state-subsidised.¹¹⁵ The material, social, and institutional contexts of technoscientific knowledge production were inseparable from the state, and state officials in turn relied on that knowledge to govern. At this point, the analytical task seems to be a contradiction in terms: how can we explain the influence of ‘science’ over ‘politics’ when each is a product of the other in fundamental ways?

Complicating matters further is the fact that practitioners certainly *acted* as though that boundary existed. They spent significant energy talking about it and judged themselves and each other on their adherence to it. For example, throughout the fifties and sixties, academics at the Massachusetts Institute of Technology’s Centre for International Studies (CENIS) debated how to produce ‘independent objective analysis of US foreign policy’, while maintaining ‘contractual relationships with the US government’.¹¹⁶ CENIS’s leadership limited the kinds of work its researchers could undertake, for example, by refusing to accept projects that were fully classified. The Central Intelligence Agency had long contributed to the Centre’s researchers’ salaries and its operating budget, but this was discontinued in 1963 due to the ‘high risk of serious embarrassment’ if its close relationship with the Agency became public. And, when it eventually did in 1966, CENIS staff claimed that the CIA was only acting

¹¹⁴ Indeed, this is inherent in the very idea of a ‘non-state actor’.

¹¹⁵ For an overview, see Engerman (2010).

¹¹⁶ Armstrong (2000), p. 248.

as an ‘administrative agent’ for the National Security Council.¹¹⁷ Politicians, meanwhile, expressed concern when scientists gave ‘political’ opinions: ‘it troubles me greatly’, wrote President Eisenhower in 1957, the ‘extent to which scientists have become military and political experts’.¹¹⁸

Rethinking what is meant by the boundary between ‘state’ and ‘society’ helps to make sense of this. Mitchell argues that ‘the boundary of the state...*never marks a real exterior*. The line between state and society is not the perimeter of an intrinsic entity, which can be thought of as a free-standing object or actor. It is a line drawn internally, *within* the network of institutional mechanisms through which a social and political order is maintained’.¹¹⁹ Furthermore, ‘maintaining the distinction between state and society is itself a mechanism that generates resources of power’.¹²⁰ Haviland Leira makes a parallel argument about foreign policy, suggesting that we understand it ‘as a specific spatial temporal resolution of the problem of delimitation’.¹²¹ He argues that foreign policy emerged as a practical concept in 17th century Europe as civil society separated from the state: ‘when the state was challenged by a free press operating in the public sphere, it reconfigured its external affairs as foreign policy’ in order to legitimise keeping certain activities a secret.¹²² Viewing the distinction between state and society as an ‘internal arrangement’ allows us to appreciate how producing technoscientific knowledge is intrinsically linked to political dynamics, while articulating that

¹¹⁷ Ibid. pp. 249-257.

¹¹⁸ Quoted in Greene (2007), pp. 151.

¹¹⁹ Mitchell (1991), p. 78. Author’s emphasis. Rose and Miller make the same claim in slightly different terms: ‘The state can be seen as a specific way in which the problem of government is discursively codified, dividing a “political sphere”, with its particular characteristics, from other ‘non-political spheres’ to which it must be related’. Rose and Miller (1991), pp. 176-177.

¹²⁰ Mitchell (1991), p. 90.

¹²¹ Leira (2019), p. 195.

¹²² Ibid.

knowledge through performances of expertise depends on reproducing the boundary between state and science.

Opportunities to acquire social capital emerge out of the contexts that traverse the boundary between ‘state’ and ‘society’. For instance, working on government contracts, at federally-funded research centres, serving on government advisory panels, and participating in conferences allows individuals to forge ties that can be leveraged to gain access to key decision-makers in the future. Meanwhile, government patronage can stimulate the emergence or ‘scaling up’ of *fields* — Bourdieu’s term for social spaces organised around the struggle for a certain type of capital.¹²³ For example, during World War II, the Research and Analysis Branch of the Office of Strategic Services brought economists, psychologists, sociologists and anthropologists together in ‘area studies’, domains of expertise defined by knowledge of specific regions.¹²⁴ The earth sciences underwent parallel changes. During the Cold War, the reliance of arms control initiatives on seismic detection technology transformed seismology from a marginal discipline with meagre funding into a massive, richly-endowed research enterprise.¹²⁵ The US Navy’s need to monitor its deep-sea listening posts fuelled the discovery of deep ocean vents and lifeforms that depended on chemosynthesis. This added new dimensions to oceanography.¹²⁶ Each of these fields was structured by contestations over cultural capital, i.e. recognised competence over a particular object of inquiry (geographic regions, the lithosphere, oceans, and so on). Individuals’ appropriation of cultural capital within these fields could be augmented by other markers of prestige and competence within

¹²³ Swartz (1997), p. 122.

¹²⁴ Isaac (2007).

¹²⁵ Barth (2003).

¹²⁶ Oreskes (2003). See also Dennis (2003); Hamblin (2005).

the broader intellectual field (e.g. institutional affiliation, publication history, education) and converted into access to decision-makers.¹²⁷

To bring social and cultural capital into a theory of expertise without treating them as a defining ‘property’ or ‘attribute’ of experts requires that we think carefully about what Bourdieu meant by ‘capital’. Drawing on Marx, Bourdieu characterised the social world we occupy as ‘accumulated history’, and various forms of capital (economic, cultural, social) as ‘accumulated labour’.¹²⁸ In simple terms, capital is ‘what makes the games of society...something other than simple games of chance...in which every moment is perfectly independent of the previous one’.¹²⁹ That is, ‘capital’ is shorthand for a social process by which actors bring some aspect of the past to bear on the present in order to effect a desired future. To say that performers of expertise leverage their social and cultural capital to gain access to decision-makers is to say that they are *capitalising* on the interpersonal ties that they have forged, as well as prior claim(s) to epistemic competence that they have sustained.¹³⁰ The analyst’s task is to establish how this was accomplished. Moreover, each performance of expertise places social and cultural capital ‘at risk’, so to speak: well-received performances allow individuals to make new connections and add to their prestige, while poor performances estrange allies and tarnish reputations. This in turn affects the chances for future performances.

¹²⁷ As Lamont and Lareau note, Bourdieu defined cultural capital in several ways: as ‘an informal academic standard, a class attribute, a basis for social selection, and a resource for power which is salient as an indicator/basis of class position. Subtle shifts across these analytical levels are found throughout the work’. Lamont and Lareau (1988), p. 156.

¹²⁸ Bourdieu (1986), p 241.

¹²⁹ Ibid.

¹³⁰ According to Bourdieu, cultural capital can exist in three states: the embodied state, the objectified state, and the institutionalised state. The kind of cultural capital I am talking about here is ‘embodied’.

4. The political effects of ‘science on stage’¹³¹

Having proposed how we might dissect performances of scientific expertise, I conclude this chapter by considering two issues relating to its political effects. First, *why* these performances might change what policymakers say or do. Second, how we can analyse the impact of these performances at the levels of policy discourse, policymaking, and policy outcomes.

Framing, dissonance, and ontological (in)security

Allan argues that experts exert agenda-setting power by discursively constructing ‘existential threats’. He and other securitisation theorists assert that a phenomenon-based threat prompts politicians to respond. I have two disagreements with this approach. First, as I argued in the Introduction, phenomena such as climate change pose a risk rather than a threat, and should be studied as such. Second, policymakers can acknowledge the existence of global warming or high population growth without feeling in any way compelled to act on this recognition. A problem appears on their agenda only when it is framed so as to implicate *them* in solving it. It is therefore important to theorise the social dynamic that underlies this process.

Constructivist scholars have proposed models of rhetorical coercion and rhetorical entrapment to explain how words alone can bring about change by ‘cornering’ actors into adopting positions that they disagree with.¹³² However, their accounts do not address why such moves can succeed. As I discussed above, they often fall back on ‘resonance’ with tropes, ideas, and norms already in circulation to explain why some rhetorical moves succeed over others.¹³³ I argue instead that the provocative potential of the scientific narratives levelled by

¹³¹ Hilgartner (2000).

¹³² For example, Schimmelfennig (2001); Krebs and Jackson (2007).

¹³³ Examples of constructivist scholars making the ‘resonance’ argument include Finnemore and Sikkink (1998); Payne (2001); Schimmelfennig (2002).

experts lies in their strategic production of *dissonance* between state leaders' roles and their actions. This dissonance is rarely explicitly stated, although it can be. More often, it inheres in the framing of an issue as a national security risk. The fundamental role of state leaders is to secure the nation and protect it from harm. This role is sustainable only if their actions are, on average, recognised as being consistent with it. Expressed differently, state leaders are authorised to act on matters of national security; if an issue is widely regarded as a national security concern and they fail to act, then their authority is questioned.

But why should they care? The answer lies in the mutually constitutive relationship between identity and agency, that is, the capacity to act. Identity forms the basis for agency, while exercising agency reproduces and stabilises that identity by 'supporting it in practice'.¹³⁴ According to Wendt, roles are a type of identity 'not based on intrinsic properties and as such exist *only* in relation to Others...one can acquire these identities only by occupying a position in a social structure and following behavioural norms toward Others possessing relevant *counter*-identities'.¹³⁵ To be realised, roles need to be performed, and to be sustained, they need to be recognised by significant Others. As Goffman puts it, 'What the individual is for himself is not something that he invented. It is what his significant others have come to see he should be, what they have come to treat him as being, and what, in consequence, he must treat himself as being if he is to deal with their dealings with him'.¹³⁶

Exposing an inconsistency in the relationship between who an actor purports to be and what she or he is doing threatens her or his ontological security. Early scholarship on ontological security in IR defined it as the fundamental need to 'experience oneself as a whole, continuous

¹³⁴ Mitzen (2006), p. 344.

¹³⁵ Wendt (1999), p. 227.

¹³⁶ Goffman (1971), p. 279.

person in time...in order to realise a sense of agency'.¹³⁷ Agency depends on a stable cognitive environment, and is achieved primarily by abrogating deep existential anxiety through the routinisation of relations with significant Others. For example, Mattern's concept of *representational force* evokes the idea that one can credibly threaten another's ontological security by 'locat[ing] the contradictions and inconsistencies in her victims and exploit[ing] them meaningfully', provoking existential anxiety and dread.¹³⁸ Mattern locates this threat in the ability to identify 'contradictions among the constitutive identities of [the] victim's Self (*intrasubjectivity*)', which is foregrounded in moments of crisis, or what she calls 'unsettled times'.¹³⁹

Drawing on pragmatist philosophy, Pratt recasts ontological security in relational terms, defining it as an actor's need to secure 'the coherence and stability of their broader social context', rather than to secure the coherence of their self.¹⁴⁰ This approach focuses on threats to the self that arise from *intersubjectivity*, or the relationship between self and Other. Here, the inconsistency to be exploited is not between the various identities that make up a person's subjectivity, but between the role that is the foundation of an individual's agency in political transactions and the actions that realise and reproduce that agency. The credible threat is of withdrawing or withholding external validation of that role, thereby disrupting the social arrangements in which the Self is placed.

Unlike psychological or affective conceptualisations of ontological security, a relational approach does not require us to assume that what actors say authentically mirrors their inner

¹³⁷ Mitzen (2006), p. 342.

¹³⁸ Mattern (2005), p. 603.

¹³⁹ Mattern (2004), p. 77.

¹⁴⁰ Pratt (2017), p. 81.

feelings. We only have to assume that actors are interested in maintaining their roles in society because they want to continue acting in it.¹⁴¹ Threatening a target's ontological security in their role vis-à-vis a significant Other creates a dissonance that destabilises their continued capacity for action. It should elicit a response from them as they attempt to reestablish congruency between who they are and what they are doing before a crucial audience. This could take the form of a counter-narrative, a change in action, or some combination of the two.

For example, international opponents of a civil war often describe it as a 'genocide' or a 'humanitarian crisis', highlighting the human rights violations perpetrated by state forces. Framing the conflict in this way implicates entities who position themselves as the guardians of human rights: for example, the UN, whose Charter commits it to the promotion and protection of 'universal' human rights, which claims to speak and act on behalf of the 'international community', and which houses a sophisticated machinery for identifying, investigating and addressing human rights abuses. Failure to react would lead others to ask: 'How can the UN call itself an authority on human rights, yet do nothing, despite clear violations here?' Representatives of the UN could respond by triggering institutional mechanisms to deal with that conflict as a humanitarian concern: a formal inquiry by the Office of the High Commissioner for Human Rights, a resolution by the General Assembly condemning the conflict, sanctions against the offending state, or the deployment of a peacekeeping mission. Or, it could offer up an alternative interpretation of the conflict as civil unrest. This would locate the conflict outside the boundary of its authority and justify non-action.

¹⁴¹ Ibid. p. 78.

In the US political context, the key significant Other we would expect performances of expertise to allude to is the abstract collectivity of ‘the nation’, or some important constituency thereof. This is why performances of expertise are sometimes directed at audiences of the general public, who embody ‘the nation’, even when the narrative imparted calls on key decision-makers to act. However, the significant Other need not be present during the performance, or even aware that it is taking place, in order for the target of the scientific narrative to feel obliged to respond. This is due to a phenomenon George Herbert Mead calls the *generalised Other*: in assuming a role identity, we acquire and internalise a generalised, abstracted sense of how we are regarded by significant Others, and define our conduct in reference to that sense.¹⁴² Because we effectively ‘carry Others around with us in our heads’, we anticipate their possible reactions to our behaviour, and factor these into our own plans, before anything has happened.¹⁴³ Thus, electoral perceptions are a primary concern for elected officials when weighing up different courses of action, even when the public is absent during those deliberations.

*Political outcomes*¹⁴⁴

At a given juncture, we can draw conclusions about the impact of performances of scientific expertise on foreign policy by examining the extent to which the narratives imparted are adopted at three levels: policy discourse, policymaking, and policy outcomes. Countervailing political, institutional, and bureaucratic factors can dampen the effect of performances at each

¹⁴² Mead (1934), pp. 152-164.

¹⁴³ Ibid. p. 63.

¹⁴⁴ This subsection adapts material from my MPhil thesis. Some of the original wording is retained, although modifications have been made. See Young (2016), pp. 42-43.

of these levels. These factors are ‘coincidentally causal’, meaning ‘we cannot imagine the outcome having occurred without it, but [they] are not part of a systematic ideal type’.¹⁴⁵

The first level, *political discourse*, refers to how the problem that the policy addresses is conceptualised and articulated by stakeholders. Having an impact at this level is nontrivial. If policy is about solving problems, then the way in which it is described and discussed constrains the solutions sought. For example, in 1980s America, AIDS was popularly framed as a ‘gay plague’ afflicting promiscuous homosexuals. This justified non-action by politicians. Today, AIDS is framed very differently, enabling a whole host of previously inconceivable policy responses.¹⁴⁶ At this level, the key factors mitigating the impact of performances of expertise are competing narratives introduced by other stakeholders, including by other experts. Opposing performers of expertise often use two tactics to challenge a scientific narrative which is in general circulation. One is to *de-risk* that narrative by suggesting that the undesirable future it anticipates is unlikely to happen, hence the national security risks are minimal and require little or no intervention to manage. Another is to *redirect* the narrative by accepting its premise, but proposing that a different intervention would better manage the identified risk. These techniques are explored in detail in the final case study on nuclear scientists and the nuclear testing debates.

The second level, *policymaking*, relates to the creation and revision of policies. Policymakers in the United States must juggle competing demands from the voting public, interest groups, lobbies, and other government bodies. Decision-makers must perceive that the benefits of implementing experts’ proposed interventions outweigh the costs. This is especially so if the interests of other stakeholders are threatened in the process. Such groups are likely to mount

¹⁴⁵ Jackson (2011), p. 150.

¹⁴⁶ See Epstein (1996).

countervailing pressure on officials to shelve policies or significantly amend them. These groups will succeed if they can provide ‘sufficient payoff[s] to decision-makers if they construct policies in the desired direction, or impose sufficient penalties if they do not’.¹⁴⁷ Decision-makers are likely to be most receptive to large, single-issue groups who control the voting preferences of their members, who can deny or ensure electoral support. An example is the anti-abortion lobby. They are also likely to be the most vulnerable to this pressure when there is an impending election.¹⁴⁸

The third level, *policy outcomes*, refers to changes in state action that result from implementing the intervention in question. The separation of powers in US politics between the executive, the legislature, and the judiciary suggests two additional requirements that must be met for a change in policy outcomes to be consistent with experts’ narratives: *gatekeepers* with power in the policy process must support the change, and the *bureaucracies* assigned to implement these policies must have the necessary inclination and organisational capacity.¹⁴⁹

First, although foreign policy is led by the president and his advisors in the executive branch, there can be multiple gatekeepers — individuals with the power to block, delay, or alter a policy. Sometimes, the president can implement his foreign policy agenda through proclamations, executive orders, or national security directives.¹⁵⁰ If experts’ proposed interventions can be effected via unilateral action, then the support of other gatekeepers becomes superfluous. However, it becomes necessary if their recommendations include new programmes that must be financed by congressional appropriations. Legislators can introduce

¹⁴⁷ Ripsman (2009), p. 181.

¹⁴⁸ Ibid. p. 182.

¹⁴⁹ The term ‘gatekeepers’ is taken from Busby (2010).

¹⁵⁰ Howell (2005).

bills dictating how these funds can or cannot be spent. Where key gatekeepers resist, experts' proposed interventions might only be partially implemented, or not at all.

Second, the narrow interests of government agencies can block the implementation of foreign policy.¹⁵¹ A policy might not be implemented if that task were delegated to a specialised agency whose bureaucratic priorities diverged from those of key decision-makers. State action could lag behind an announced policy shift if senior bureaucrats were reluctant, while swift changes could follow if they concurred with experts' proposed interventions.¹⁵²

¹⁵¹ See Allison and Halperin (1972); Halperin et al. (2006).

¹⁵² Wittkopf et al. (2008), pp. 473-479.

3. Methodology

This chapter sets out my methodology. I first organise the ideas developed in the preceding chapter into a theory that can be applied empirically, and compared to leading alternatives. I then explain my case selection. I conclude by discussing my primary sources.

1. Empirical investigations

I do not attempt a complete history of events in the following chapters. That is a task better left to historians. Instead, each case study forms an analytical narrative organised around key performances of expertise. Analytical narratives ‘use ideal types to organise the empirical material of specific cases into a coherent story that differentiates between analytically general and case-specific factors responsible for bringing about an outcome and details their sequential interaction and concatenation over the time frame of the analysis’.¹

Performances of scientific expertise (and their constituent parts), *scientific narratives* (and their constituent acts), and *risks* are the key ideal types in my theory. I define a performance as an intentional, strategic combination of actions and utterances by an individual or group of individuals which conveys a message to an audience. A performance of scientific expertise establishes an objective claim to knowledge about the future. Whether this performance is ‘key’ is not determined by its outcome — how ‘impactful’ or ‘influential’ it was, according to some measure — but by a judgement about what was at stake to the performers: how much they thought the performance mattered, the time and resources they were willing to expend

¹ Jackson (2011), p. 154.

preparing for it, and how much social capital they invested in bringing the audience together. Performances of expertise articulate new scientific narratives or engage with ones already in circulation. Articulation is the production of meaning ‘out of extant cultural raw materials or linguistic resources’.² Scientific narratives specify risks that global governance objects pose to national security, and propose interventions to manage those risks. Risks represent danger as configurations of conditions that increase the possibility of harm occurring.³

The creation of governable ‘things’ is a collaborative and cumulative process that involves the efforts of many individuals over time. Therefore, the first section of each case study traces the formation of the global governance object at the centre of the scientific narrative, and how it was scaled up from historically specific events and/or data.

Analysing each performance is a five step process:

1. ***Establish what the performance was.*** This means identifying who the performers were, what parts they played, who their intended audience was, what the performance setting was, and what artefacts (charts, reports, etcetera) were used, if any.
2. ***Situate the performance in historical context.*** Performances of expertise did not take place in a vacuum, and the narratives they imparted were ‘contingent and contextually specific representations of the world’.⁴ When crafting their message, performers drew on, and tried to influence ongoing debates in a political community. Here, the aim is to understand the ‘status quo’ the performers confronted. This means considering relevant developments in the intellectual field(s) they were part of, and political developments.
3. ***Reconstruct the process enabling that performance.*** This involves investigating what happened backstage. How were the performers assembled, and by whom? How did teams capitalise on their reputations and social ties to create performance

² Weldes (1999), p. 98.

³ Corry (2012), p. 248.

⁴ Weldes (1999), p. 98.

opportunities? What stage management practices were employed? Stage management refers to the measures undertaken by performers to control the presentation of information to the audience. Their effectiveness can be inferred by comparing the events of front stage versus backstage, as well of the differences in region-specific behaviour. The aim is to understand what performers were aware of, what they admitted to each other, and how this differed from what they shared with their audience. This allows us to establish how a team of performers was able to achieve closure, and fix ‘the definition of the situation’.⁵

4. ***Analyse the delivery of the performance, including the scientific narrative it conveyed (or engaged with).*** Here, we want to recreate the front stage of the performance through a close reading of primary sources. Performances of expertise can be delivered in a variety of ways: purely textually, such as a report landing on an official’s desk; a combination of textually and in person, such as a committee chair rising to summarise the findings of a major study; and entirely in person, such as during a congressional testimony. Regardless of the medium, we should identify any boundary maintenance practices performers engage in to signal to the audience that they are ‘doing science’ rather than some other activity. We also want to trace the scientific narrative the performance imparted or engaged with. In the previous chapter, I disaggregated scientific narratives into several acts: scaling a global governance object, forecasting an undesirable but avoidable future for that object, proposing interventions to manage risk to that object, identifying an actor as responsible for intervening, and identifying an opportunistic enemy that is waiting to exploit the consequences of non-action.
5. ***Trace the effects of the performance and link them to any policy outcomes.*** First, how did the audience respond? Primary sources provide insight into this, although accounts of their immediate reaction may not always be available.⁶ The audience’s response indicates whether, and to what extent, the performance had its intended effect: was the scientific narrative accepted? What modifications or departures could be found, if any? Did audience members also accept the implications suggested by the narrative, or did they draw the boundaries of acceptable action differently? The audience’s

⁵ Goffman (1956), p. 3.

⁶ Most of the performances of expertise analysed in the case studies were before audiences of policymakers; this step is written assuming this is the case. If a conversation transcript or meeting memorandum is available, identifying their immediate reaction is relatively straightforward. If no such record exists, then their response has to be inferred through subsequent statements, e.g. in speeches.

reaction can also indicate whether or not any boundary maintenance by the performers was effective. If they challenged or chastised the performers for behaving in a manner inconsistent with their roles as scientific experts, or for being ‘too political’, this suggests that boundary maintenance has failed. Second, to what extent was the scientific narrative imparted taken up at the three levels discussed in Chapter 2: political discourse, policymaking, and policy outcomes? At each of these levels, did any of the countervailing political, institutional, and bureaucratic factors identified previously dampen the effect of the performance?

In following this process, the main obstacle for the researcher is the availability and quality of primary source material. We can only analyse performances that leave a trail of evidence behind. My study benefits from the rich array of documents housed in the US National Archives and deposited with universities and private foundations. Many of the individuals I researched also published memoirs and diaries. These were particularly useful if contemporaneous accounts of the backstage of a performance, such as letters or meeting transcripts, were unavailable.

2. Case selection

This thesis argues that, through performances of expertise and the scientific narratives they imparted, America’s leaders increasingly came to regard the postwar world as a single entity confronting an array of social, economic, and biospheric risks to US national security that required management. Risk management was an approach that was distinct from mitigating the threat posed by the Soviet Union and its allies, and just as fundamental to conceptions of national security in the early Cold War.

These arguments can only be grounded in individual cases: it is not possible to explore the formation of a political rationality in the abstract. However, a single case study does not lend sufficient credibility to these claims. I therefore consider the general question of how scientific expertise shaped American political rationality in three cases. They cover a broad range of

issues and regions: population scientists and population assistance to the developing world, modernisation theorists and foreign aid for economic development to Latin America, and nuclear scientists and the test ban debates leading up to the Partial Test Ban Treaty.

I want to stress that this is *not* a comparative case study, whose purpose would be to isolate variables of casual significance.⁷ However, I still make a causal claim: that, absent certain performances of expertise and the narratives they conveyed, American leaders would not have seen the world as consisting of a series of risks to be managed, and certain foreign policies they pursued would have been inconceivable. The explanations I give for the events under consideration in each case study are causal in the analyticist rather than the neo-positivist sense of inferring effects from observed empirical regularities.⁸ An analyticist causal explanation has pragmatic goals: it ‘responds to a problem-situation in which the challenge involves how to do something, and unfolds by clarifying why and how some outcome rather than some other outcome came about — thus giving instructions on how to make the desired outcome happen’.⁹

This notion of causal explanation informs my case selection. Saylor remarks that, while researchers who advance case-specific explanations are ‘doing something distinct from making causal inferences’, they ‘continue to select cases according to guidance that presumes they are pursuing causal inferences’.¹⁰ For example, they pick cases that are ‘representative’ of some larger class of units, or show that they have ‘controlled’ for ‘confounding variables’.¹¹

⁷ See George and Bennett (2005), Chapter 8.

⁸ Saylor (2020), p. 986.

⁹ Jackson (2017), pp. 691-692. The synergies between an analyticist approach to studying international politics and the American philosophical tradition of pragmatism are addressed in *ibid.*, as well as in Jackson (2011), Chapter 5. In short, analyticists are guided by utilitarian principles in their selection of ideal types.

¹⁰ Saylor (2020), p. 983.

¹¹ *Ibid.* p. 984.

He suggests that researchers should instead choose cases with ‘contextual features that make it relatable to an ideal type’ (or types).¹² My cases share contextual features that engage my ideal types of performance of expertise, scientific narrative, and risk: they concern individuals who stake a claim to knowing something valuable about the future, couch that claim in objective terms, and urge policymakers to act on a danger that inheres, not in malicious actors, but in abstract entities. While radically simple, this approach to case selection better coheres with the goal of building an explanation.¹³ It is not possible to know in advance the extent to which the ideal types chosen can account for all permutations within a case; rather, it is the process of accounting for how ideal types combine with non-systematic factors to bring about an outcome that constitutes the explanation.¹⁴

My case selection has several other advantages. The cases encompass attempts by both social and natural scientists to shape US foreign policy in the early Cold War era. The social sciences were widely regarded as the poor relation of the natural sciences during this period.¹⁵ To be recognised as legitimate scientists on a par with natural scientists, social scientists gradually appropriated the performative conventions of the natural sciences by, for example, phrasing claims in terms of universal laws, supported by large-scale statistical studies and mathematical models. Examining social scientists’ contributions to foreign policy therefore presents a unique opportunity to analyse the making of expertise. The inclusion of nuclear scientists, meanwhile, allows me to evaluate one of Haas and Adler’s chief propositions: that epistemic communities’ political influence flows unproblematically from their ‘recognised expertise’ and

¹² Ibid. p. 982.

¹³ Ibid. p. 1008.

¹⁴ Ibid. p. 1003.

¹⁵ See Solovey (2004); Haney (2008).

‘authoritative claim to policy-relevant knowledge’.¹⁶ The status discrepancy between natural scientists and social scientists would lead us to expect that the former would, on balance, outperform the latter in terms of agenda-setting ability. If the evidence presented for this case study suggests otherwise, this calls into question the utility of a leading alternative explanation to my theory.

Third, the case study on the nuclear testing debates serves an additional purpose. The nuclear scientists I discuss in Chapter 6 were mostly chemists and physicists by training, but their claim to epistemic authority also derived from building the weapons which allowed America to end World War II and emerge from it an unrivalled superpower. Like other scientists who were active in the nuclear testing debates, such as geneticists, they were empowered to comment on the effects of nuclear fallout on the biosphere. In addition, they could also participate in conversations about America’s military capabilities, and whether they formed an adequate deterrent against the Soviet threat. Including nuclear scientists in my study therefore permits an investigation of how performers arbitrage between discourses of danger as threat and danger as risk by speaking as defence experts at certain times and speaking as scientific experts at others.¹⁷

Lastly, scholars who adopt the epistemic community framework often select as their end point for their studies the first successful enactment of a policy that apparently shows decision-makers being persuaded by an epistemic community.¹⁸ This approach risks overstating the

¹⁶ Haas (1992), pp. 3, 17.

¹⁷ My use of ‘arbitrage’ tracks closely with Leonard Seabrooke’s notion of ‘epistemic arbitrage’, which is when professionals ‘mediate between knowledge pools for strategic advantage’. Seabrooke (2014), p. 49; see also Seabrooke (2014b).

¹⁸ This paragraph adapts material from my MPhil thesis. Some of the original wording is retained, although modifications have been made. See Young (2016), pp. 27-28, 48.

overall impact that a group of experts has on political outcomes.¹⁹ In contrast, each of my case studies examines performances of expertise over an extended period: the case studies on the modernisation theorists and nuclear scientists analyse events from the Eisenhower and Kennedy administrations, while the case study on population scientists spans the Eisenhower through Reagan administrations. Each case study includes instances where the scientific narratives introduced via performances of expertise were taken up at the levels of policy discourse, policymaking, and policy outcomes, as well as instances where performers, but failed to make an impact at each of these levels.²⁰ This recognises that most foreign policy is an iterative process of experimentation and adjustment, subject to negotiation and renegotiation over an extended period.

3. Alternative theories

A theory can add value by making sense of events that confound alternative theories. It would be inappropriate to position the theories of experts (not expertise) discussed in the previous chapter as directly competing with mine because we are each trying to explain slightly different phenomena. Still, those theories engage to some extent with two questions: how best to characterise what experts ‘do’ in political settings, and how to causally account for their impact. I list their observable implications below. The penultimate section of each case study compares their explanatory purchase with my theoretical framework. The point is not to prove that one theory or the other is ‘valid’ or ‘invalid’, ‘true’ or ‘false’, but to evaluate which one is more instrumentally useful in understanding the events that took place.²¹

¹⁹ See Cross (2013) for a critique of the existing epistemic communities literature. See also Young (2016), pp. 17-20.

²⁰ In neo-positivist terms, my cases contain significant ‘within-case variation’. See Gerring (2004).

²¹ Jackson (2011), pp. 146-147.

Epistemic community theory

Epistemic community theory draws on Habermas's notion of communicative action to claim that experts drive change by persuading decision-makers to adopt new problem definitions and solutions that reduce uncertainty.²² Situations where experts invoke rank or status to 'argue', or where their arguments shift depending on the audience, preclude communicative action.²³ We would expect to observe an exchange of perspectives that featured reasoning tested in debate about the validity of arguments.²⁴ Because communicative action seeks consensus, both sides should be open to persuasion. We would also expect experts to seek a wide spectrum of evidence, and to revise their views in light of new evidence, instead of suppressing that evidence if it conflicts with previously-held positions. Finally, we would expect what experts say in private and in public to be consistent. For example, if experts admit to each other that the evidence for their claims is circumstantial, we would expect this to be shared with their audience.

Securitisation theory

Allan casts experts as powerful securitising actors, and posits that they exert agenda-setting influence by constructing 'existential threats'.²⁵ Rather than reducing uncertainty, as epistemic community theory suggests, experts strategically inflate it in order to mobilise political action. In communicating with audiences, we would expect experts to employ the 'grammar of security'. This defines 'an existential threat, a point of no return, and a way out'.²⁶ We would also expect their claims to 'generate fear of a partially unknown future' in

²² Haas (1992).

²³ Risse (2000), p. 18.

²⁴ Ibid. p. 7.

²⁵ Allan (2017a).

²⁶ Buzan et al. (1998), p. 33.

which humans ‘might find themselves unable to adapt to unanticipated changes’ in unstable systems.²⁷ We would know if a securitising move was successful if a problem was removed from the realm of ‘normal politics’ and ‘emergency measures’ were adopted to neutralise the ‘existential threat’ to the ‘survival of some referent object, such as the state’ by a particular group of experts.²⁸

4. Primary sources

I draw on a large number of published and unpublished primary sources collected between 2015 and 2021.²⁹ Published primary documents include oral history interviews; autobiographies; memoirs; monographs; journal articles; presidential public documents from *The American Presidency Project* and the *Public Papers of the Presidents* series; the *Foreign Relations of the United States* volumes; the Avalon Project, a digital library maintained by the Lillian Goldman Law Library at Yale Law School; and congressional documents, especially hearings conducted by the Senate Foreign Relations Committee. Contemporaneous accounts of particular events were found in the digital archives of *The New York Times* and the *Washington Post*.

All three case studies make extensive use of unpublished material from the US national archives. The case studies on modernisation theorists and nuclear scientists heavily reference material from the Eisenhower and Kennedy Presidential Libraries. The case study on population scientists also makes use of the Truman, Johnson, Nixon, Ford, and Reagan

²⁷ Allan (2017a), pp. 810-812.

²⁸ Ibid. p. 811.

²⁹ Most of the material relating to population scientists was gathered as part of research for my MPhil in International Relations at the University of Oxford (2014-2016). The rest was collected during the DPhil (2016-2022).

Presidential Libraries, and the National Archives at College Park, Maryland. Most of this material was retrieved directly from the archives. Some was stored on the Declassified Documents Reference System, an online database maintained by Gale. Others were taken from two microfilmed collections, *The Diaries of Dwight D. Eisenhower, 1953-1961*, and *The Papers of the President's Science Advisory Committee, 1957-1961*, both accessed at the Liddell Hart Centre for Military Archives at Kings College London.

These sources are supplemented by documents from private collections. The case studies on modernisation theorists and nuclear scientists draw on the Institute Archives at MIT's Department of Distinctive Collections. The case study on population scientists uses material from the Rockefeller Family Archive, which contains the records of the Rockefeller Foundation, the Ford Foundation, and the Population Council; and the Hugh Moore Fund Collection at the Princeton University Library. The case study on nuclear scientists references the Stuart Symington Papers at the State Historical Society of Missouri, the George B. Kistiakowsky Papers at the Harvard University Archives, and the Edward Teller Papers at Stanford University's Hoover Institution Archives. Professor Paul Robinson of Bridgewater State University kindly lent me his folder of documents from the Edward Teller Papers when the Hoover Institution was closed for renovation between 2019 and 2020.

4. Modernisation theorists and foreign aid for economic development to Latin America

Poverty as a global problem is a postwar invention. ‘The poor’ emerged as a distinct social category in 19th century Europe, as did the political enterprise of ‘assisting’ them, which became the basis of the modern welfare state. Meanwhile, the indigenous inhabitants of European colonies were subjected to various ‘civilising’ initiatives to rescue them from primordial backwardness.¹ But the notion that entire continents — specifically, Asia, Africa and Latin America — were defined by ‘grinding poverty and lack of opportunity’, as President Truman commented in 1949, did not materialise until after World War II, when the first national income accounts were compiled for non-Western countries. Statistical innovations such as gross national product (GNP) and gross domestic product (GDP), propagated by institutions like the World Bank, revealed a world that was startlingly, horrifyingly poor.²

The solution to global poverty was something called ‘development’. In American policymaking and philanthropic and academic circles, development increasingly implied *modernisation*: a state-led, holistic process of socioeconomic transformation which would raise impoverished countries to the level of the advanced industrial nations of the West. As David Ekbladh notes, ‘modernisation thinking’ in America had roots in the Reconstruction Era following the Civil War, in the colonial administration of the Philippines, and in the public works programmes of the New Deal, for example, the Tennessee Valley Authority.³ Americans were also keenly aware that their enemies — first the Nazis, then the Soviets —

¹ Escobar (1995). On the discovery of ‘the poor’ during the 19th century, see Lees (1998).

² Speich (2011).

³ Ekbladh (2010). See also Haskell (2005).

presented alternative pathways to modernity. Aspirations for development were codified in the UN Charter and became the animating goal of several of its specialised agencies, such as the World Health Organisation and the Food and Agriculture Organisation.⁴

Development was, therefore, already a rhetorical commonplace by the late 1940s. Commonplaces, according to Jackson, are ‘those vague notions that command more or less general assent in the abstract but that stand in need of detailed specification before they can be determinately linked to specific courses of action’.⁵ This chapter focuses on one specification of development: the scientific narrative of modernisation theory devised by Walt Rostow and Max Millikan at the Centre for International Studies (CENIS) at MIT. I trace how, through performances of expertise, this narrative helped to shape a political rationality of foreign aid that problematised ‘underdevelopment’ as a national security risk. It was defined by the clean separation of ‘military’ from ‘economic’ assistance. Economic assistance was to be funnelled into long-term national development programmes which aimed, above all, to boost GDP per capita. A major expression of this rationality was the Alliance for Progress: a much-feted initiative by the Kennedy administration to catalyse the ‘takeoff’ of Latin American countries with a massive injection of foreign aid dollars. The Alliance was positioned as the opening spectacle of Kennedy’s ‘Decade of Development’ — another invention of Rostow’s — but largely failed to meet its own targets for stimulating economic growth.

⁴ Ekbladh (2010).

⁵ Jackson (2006b), p. 266.

The scientific narrative Rostow and Millikan advanced identified the economies of the ‘underdeveloped areas’ as objects of global governance.⁶ From the 19th century rise of industrial Western economies they extrapolated ‘stages of growth’ that all societies would pass through. They argued that an unstoppable ‘revolution of rising expectations’ was underway in underdeveloped areas as their inhabitants demanded better standards of living. The leaders of these countries were faced with three possible pathways: traditionalist suppression, autocratic modernisation, or democratic modernisation. The first two posed risks to American national security. These undesirable futures could be avoided if the US intervened as the developing world’s ‘partner in progress’ and provided long-term capital assistance to help these countries achieve ‘self-sustaining growth’ through national development plans. Failure to do so would be opportunistically exploited by the Soviets to expand their influence. This narrative was rooted in the prevailing assumption that the engine of modernisation was economic growth. Rostow and Millikan’s distinctive contribution was to disaggregate that growth into universal ‘stages’ determining the type and amount of external assistance required by developing countries, and to spell out the implications of modernisation for American national security.

This narrative, and the Kennedy administration policies it legitimised, seemed at odds with the Eisenhower administration’s approach to underdeveloped countries, often described as ‘trade, not aid’. They were not actually that dissimilar. Both defined poverty as a global problem with implications for US national security, but proposed different interventions to manage this problem. The ‘trade, not aid’ approach acknowledged that endemic poverty could make societies more vulnerable to Communist subversion, but restricted America’s role

⁶ The key texts in which they laid out their narrative were: *The World Economic Plan* (1954), *A Proposal: Key to an Effective Foreign Policy* (1957), and Rostow’s *Stages of Economic Growth: A Non-Communist Manifesto* (1960).

to creating a favourable environment for development by encouraging private investment and free trade.

A third take on ‘poverty/development’ with a distinctly Latin American twist was also circulating around this time. This was the ‘structuralist’ thesis of economic development; its home was the UN’s Economic Commission for Latin America (ECLA), led by the Argentinian economist Raul Prebisch. The key difference between structuralism and Rostow and Millikan’s version of modernisation theory was that the former regarded ‘development’ and ‘underdevelopment’ as *interdependent* conditions. Protectionist policies in the world’s industrial core created deteriorating terms of trade for raw materials in peripheral countries, thus perpetuating their economic stagnation. Consequently, they could not modernise in the same way as Western Europe and America had done, and had to embark on import substitution industrialisation to protect infant industries instead.⁷ Their scientific narrative initially focused on domestic economic reform rather than foreign aid, but was later adapted by left-leaning Latin American leaders such as Juscelino Kubitschek to legitimise their demands for economic assistance from the United States.

Performances of expertise by structuralist economists typically occurred at regional economic conferences and before Latin American politicians, whereas modernisation theorists focused their energies on US policymakers. To create performance opportunities, Rostow and Millikan drew on social and cultural capital accumulated over careers typical of successful academics of their generation. Both men held distinguished positions at Ivy League institutions before entering government service in the 1940s. Rostow first served in the Office of Strategic Services; after the war ended, he moved to the German-Austrian Economic

⁷ For an overview of Latin American structuralism, see Love (2005); Sikkink (1998).

Division at the State Department, and was then involved in the UN's Economic Commission for Europe. In 1950, he became a professor of economic history at MIT, joining the Centre for International Studies (CENIS) when it was established a year later.⁸ The director of CENIS, Max Millikan, had worked as a senior economist in several emergency war agencies, then at the State Department and the CIA.⁹ The Centre was at the vanguard of a new breed of research institution in the human sciences: it was multidisciplinary and embedded in a private university, but received a large portion of its funding and work from the federal government. Its mission, to 'apply social science to problems bearing on the peace and development of the world community', exposed its staff to a range of government figures and their close confidantes.¹⁰

Though their pedigrees and connections created plenty of performance opportunities for Rostow and Millikan, the immediate embrace of their scientific narrative was not guaranteed. Sympathetic audiences did not readily translate into concrete action and, even when policymakers pledged to act, change was stymied by the bureaucratic and legislative hurdles of designing and funding foreign aid programmes. The first two performances of expertise analysed in this chapter evince these frustrations as Rostow, Millikan and their collaborators tried to convince the Eisenhower administration to overhaul its approach to development assistance. The first performance delivered a World Economic Plan, which was promoted as the output of a two-day conference in Princeton. In fact, the scientific narrative contained in the Plan had been fixed ahead of time by Rostow, Millikan and C.D. Jackson. The purpose of the conference was to lend credibility to the Plan, not debate its content. That proposal

⁸ For a comprehensive biography of Rostow, see Milne (2008).

⁹ Collection Overview, Max F. Millikan Papers, MIT Institute Archives.

¹⁰ Millikan quoted in Gilman (2007), p. 159.

languished because government officials were unwilling to ask Congress to finance ‘bigger and better giveaways’.¹¹ Several years later, the Plan was expanded into a full-length book, *A Proposal: Key to an Effective Foreign Policy*. The attention it received gave Rostow and Millikan a platform from which to influence the foreign aid debates of 1957-1958. Their appearances before various committees added support to a State Department proposal for a Development Loan Fund, which was consistent with their own recommendations. However, the Fund was eviscerated during the congressional appropriations process. In both cases, performances of expertise impacted policy discourse, but not policy outcomes.

The focus of this chapter then shifts to the partnership between CENIS researchers and John F. Kennedy. This began with Rostow’s testimony before the Senate Foreign Relations Committee, which helped justify Kennedy’s call for increased development assistance to India. I argue that the convergence of modernisation theory and US foreign economic policy in Latin America was a product of the 1960 presidential elections. By analysing Kennedy’s speeches, which were drafted with the help of CENIS faculty, I demonstrate how the scientific narrative of modernisation theory enabled the ‘loss’ of Cuba to be framed as the tragic outcome of Eisenhower’s neglect of Latin American underdevelopment, thus legitimising Kennedy’s call for a new approach to hemispheric relations: an Alliance for Progress.

Finally, I examine the Alliance itself. After Kennedy’s election, the Task Force on Immediate Latin American Problems was convened to transform the Alliance from a campaign pledge into substantial policy. Although the Task Force was comprised of Latin American specialists, its proposals for the Alliance originated in a separate workshop at the Harvard Club where CENIS faculty dominated. The distinctive multilateral character of the Alliance can be traced

¹¹ Eisenhower, ‘Letter to C.D. Jackson’, 16 August 1954. *The Papers of Dwight David Eisenhower*.

to this meeting. There, the attendees proposed an institutional design that was consistent with the notion of a ‘partnership’ with developing countries: an independent panel of experts to review national development programmes and make non-binding recommendations to potential donors, plus an interstate conference to inaugurate such a programme.

The reasons for the Alliance’s failure to catalyse the economic ‘take-off’ of Latin American countries are multifaceted. I suggest that the scientific narrative of modernisation theory contributed to this failure by binding the US to an institutional design that made success on its own terms needlessly difficult. A feeble bureaucratic apparatus for implementing the Alliance in the Inter-American Economic and Social Council was mirrored in the incompetence of its US coordinator, Teodoro Moscoso, then crippled by hostile gatekeepers during the congressional appropriations process. Finally, the logic of risk management embodied by the Alliance clashed with the logic of threat mitigation as Kennedy and his successor Lyndon Johnson tried to contain Communism by interfering in the internal affairs of Latin American states. American officials lurched between meeting a ‘revolution of rising expectations’ and quashing actual revolutionaries, resulting in a regional strategy that, at times, seemed profoundly contradictory.

1. Accounting for the economy

The concept of the national economy as an governable object — ‘the self-contained structure or totality of relations of production, distribution, and consumption of goods and services in a given geographic space’ — emerged during the 1930s with the first national income accounts.¹² To Western writers and thinkers of earlier centuries, ‘economy’ meant either

¹² Mitchell (2005), p. 127.

spendthrift behaviour, or the administration of a community's affairs.¹³ As Daniel Hirschmann argues, the idea of 'the economic' as a sphere of human activity distinct from politics and nature took shape in the 18th century, but the techniques to calculate the size of 'the economy' were only invented during the interwar period.¹⁴

These techniques reflected changes in economic thinking, which, in turn, were a response to the sociopolitical upheaval of that era, including the Great Depression. The first representations of the economy as a dynamic system subject to external shocks came from the realisation that changing individual utilities alone could not account for market fluctuations.¹⁵ Around the same time, printed money was widely adopted as a medium of exchange in Western countries. This inspired John Maynard Keynes to envisage the economy 'not as an aggregation of markets in different commodities, but as the circulation of money'.¹⁶ Government statisticians in Britain and America, whose previous attempts to calculate national 'wealth' had been frustrated by the problem of double counting, now pivoted to tabulating national 'income': the sum of all instances in which money changed hands within the bounded geographic space of the nation-state.¹⁷

World War II cemented the importance of national income accounts to political rule on both sides of the Atlantic. It anchored wartime planning and postwar reconstruction efforts, offering 'a new, everyday political language in which the nation-state could speak of itself and imagine its existence as something...subject to political management'.¹⁸ The first national

¹³ Mitchell (2002), p. 4.

¹⁴ Hirschmann (2016), pp. 22-24.

¹⁵ Mitchell (2005), p. 131.

¹⁶ Ibid. p. 135.

¹⁷ Ibid.

¹⁸ Mitchell (2005), p. 136.

income accounts were compiled by Simon Kuznets for the US Department of Commerce in 1934. In 1941, Keynes, Richard Stone and James Meade did the same for Great Britain, but also included government expenditure as a contribution to national income, which, until then, had only counted goods and services owned by private actors.¹⁹ For the first time, they calculated Britain's gross national product: 'the total market value of goods and services produced within a national economy'.²⁰ By the mid-1940s, GNP had displaced national income as the key indicator of an economy's size and health. It underpinned an emergent 'growth paradigm': postwar governments tackled poverty, distributional conflict, and mass unemployment brought about by demobilisation with policies to 'grow' the economy. 'Economic growth' became coterminous with national progress and wellbeing — a mantra later embraced by postcolonial leaders.²¹

The standardisation of national income accounting methods turned national economies into objects of global governance. It was spearheaded by economists at the Organisation for European Economic Recovery in order to coordinate the Marshall Plan, then was promoted globally by the United Nations.²² These methods enabled the great variety of economic activity taking place across the world to be attributed to discrete national economies. A universal set of statistical aggregates — consumption, investment, government spending, and net exports — distilled and compared their essential characteristics. The enthusiastic uptake of national income accounts by governments and international organisations drowned out academic protests that it was ill-suited to places where corporations did not dominate production, where people's livelihoods came from subsistence rather than wage labour, and

¹⁹ Schmelzer (2016), p. 92. See Suzuki (2003) for an account of parallel developments in interwar Britain.

²⁰ Macekura (2020), p. 35.

²¹ Ibid. p. 36.

²² Schmelzer (2016), p. 88.

where the state lacked a sophisticated tax system.²³ It also embedded the exclusion of unpaid household work — usually performed by women — from the economy. While statisticians acknowledged that domestic labour probably accounted for a substantial share of national income, it did not command a market price, so was difficult to quantify.²⁴ Lastly, as empires collapsed, national income accounting and GNP offered a neutral terminology for expressing the differences between Europe and America and the rest of the world. People in Asia, Africa and Latin America were no longer racially inferior or uncivilised, just poor; and their economies not backwards or primitive, but ‘underdeveloped’.²⁵

2. The World Economic Plan (1954)

The World Economic Plan was an ambitious proposal to increase US economic assistance to developing countries, formed in a climate of institutionalised hostility towards such initiatives. While not directed at Latin America specifically, it was the first concerted effort by CENIS scholars to craft a scientific narrative that identified ‘underdeveloped’ economies as a risk to US national security.

The Plan was ostensibly the product of a two-day conference involving academics, government officials, and senior businessmen, held in Princeton in May 1954. The conference gave the impression that its attendees were participating in a consensus-building exercise, lending credibility to its output. In reality, the narrative endorsed by the attendees had been determined in advance by C.D. Jackson, Millikan and Rostow, who exercised directive

²³ See Hirschmann (2016), Chapter 3.

²⁴ Hirschmann (2016), p. 17. For the same reason, environmental degradation was also excluded from national income accounts.

²⁵ Speich (2011), p. 25. In this chapter, the terms ‘underdeveloped’ and ‘developing’ are used interchangeably.

dominance. This was concealed from the attendees, as well as from the intended audience of executive decision-makers.

Ultimately, the Plan had a limited effect on policymaking or policy outcomes. Policymakers generally accepted its premise — that underdeveloped economies posed a national security risk. Some also accepted its conclusion — that the US ought to manage that risk through an expanded programme of foreign aid — while others rejected it. No one, however, was willing to implement such a programme, because it was widely anticipated that both Congress and the Treasury would balk at being asked to finance ‘bigger and better giveaways’ to developing countries.²⁶

Historical background

In 1949, President Harry Truman promised to ‘embark on a bold new programme for making the benefits of our scientific advances and industrial progress available for the improvement and growth of underdeveloped areas’.²⁷ The American government’s interest in development is often traced to this inaugural speech, but this overlooks important antecedents: the public health projects conducted by the Institute of Inter-American Affairs in Latin America, the Tennessee Valley Authority’s comprehensive programme to tackle rural poverty, and the UN Relief and Rehabilitation Administration’s efforts at postwar reconstruction, which was mainly financed by the US government.²⁸ All these initiatives aimed to improve peoples’ socioeconomic circumstances, and all identified those improvements with furthering the national interest.

²⁶ Eisenhower, ‘Letter to C.D. Jackson’, 16 August 1954. *The Papers of Dwight David Eisenhower*.

²⁷ Truman, ‘Inaugural Address of Harry S. Truman’, 20 January 1949. The Avalon Project.

²⁸ Erb (1985); Macekura (2013).

Truman envisaged a modest scheme of technical assistance to transmit technoscientific knowledge to developing nations in fields like sanitation, agriculture, and communications. In this respect, his ‘Point Four’ programme did not break new ground. Its significance lay in committing the US to a ‘continuing and self-perpetuating global mission’ to uplift the so-called underdeveloped areas, powered by the conviction that ‘greater production is the key to prosperity and peace’, as the president phrased it.²⁹ When it was signed into law as the International Development Act in 1950, supporting economic development overseas became a permanent part of the government’s foreign policy machinery.³⁰ Point Four explicitly excluded financing for key infrastructure projects like roads and dams — this was left to IGOs and private investors. Truman considered it appropriate for the government to ‘accelerate’ private investment in developing countries, but not to replace or exceed it.³¹ This view was reflected in the tight-fisted policies of US-backed lending institutions. Theoretically, developing countries could obtain economic assistance from the US via the Export-Import Bank (EIB) or the International Bank for Reconstruction and Development (IBRD). However, both granted ‘hard’ loans, which were repayable in convertible currencies at commercial interest rates. Infrastructure projects yielded insufficient return to repay these loans, and the American government resisted ‘softening’ them with favourable terms.³² To secure funding for these institutions and other aid programmes, officials had to argue their case annually before four committees in the House and Senate.³³

²⁹ Erb (1985), p. 249; Truman, ‘Inaugural Address of Harry S. Truman’, 20 January 1949. The Avalon Project.

³⁰ Ekbladh (2011), p. 98.

³¹ Truman, ‘Special Message to the Congress Recommending Point 4 Legislation’, 24 June 1949. The American Presidency Project (hereafter TAPP).

³² Edgerton (1970), p. 25.

³³ The Senate Foreign Relations Committee, the Senate Appropriations Committee, the House Foreign Affairs Committee and the House Appropriations Committee.

Eisenhower maintained this conservative approach. He campaigned for the presidency on a platform of fiscal responsibility; this and nuclear deterrence formed the basis of his administration's 'New Look' national security policy.³⁴ Like Truman, he identified American national interests with encouraging development: his 'Chance for Peace' speech after Stalin's death affirmed American readiness to 'help build a world in which all peoples can be productive and prosperous'.³⁵ However, as the New Look hardened, its proponents envisaged a diminishing contribution by foreign aid to that effort: 'it should be possible in the near future...to generally eliminate most grant economic aid, if coupled with appropriate US economic and trade policies'.³⁶ The primary role of the US vis-à-vis developing countries was to promote free trade and private investment; foreign aid would be reserved for 'areas under direct assault from "the Communist menace"'.³⁷

This was the orthodoxy of the early fifties: as chief defender of the global capitalist system, the US aimed to create a conducive climate for development by encouraging free trade, currency convertibility, and private investment. It would generously share its technoscientific knowledge with underdeveloped areas. However, it accepted no responsibility for using federal funds to stimulate economic growth overseas. Grants were to be phased out, and long-term development programmes without political strings attached were off the agenda. This stance was upheld by a 1953 presidential commission to review foreign economic policy, led by Clarence Randall. 'Underdeveloped areas are claiming a right to economic aid from the

³⁴ Bowie and Immerman (2000).

³⁵ Eisenhower, 'Address "The Chance for Peace" Delivered Before the American Society of Newspaper Editors', 16 April 1953. TAPP.

³⁶ Lay, 'Note by the Executive Secretary to the National Security Council on Basic National Security Policy', 30 October 1953. *FRUS*.

³⁷ Rabe (1988), p. 65.

United States', the commission's final report stated, 'we recognise no such right'.³⁸ Its findings were summarised in an early 1954 presidential speech to Congress:

Aid — which we wish to curtail;

Investment — which we wish to encourage;

Convertibility — which we wish to facilitate;

Trade — which we wish to expand.³⁹

Performance: backstage

The main orchestrator of the World Economic Plan was C.D. Jackson, Eisenhower's outgoing Special Assistant for International Affairs. Jackson was a senior executive at Time Magazine who wrote speeches for Eisenhower and advised him on psychological warfare. In 1952, Jackson hosted a conference on psychological warfare at Princeton, where a number of CENIS scholars attended. This included Walt Rostow, who was then head of the Soviet Vulnerability Project. Rostow helped Jackson draft two of Eisenhower's major addresses: 'The Chance for Peace' and 'Atoms for Peace'.⁴⁰ These early engagements paved the way for sustained collaboration on the issue of development assistance.

As Eisenhower reviewed the Randall Commission's report, Jackson met with Secretary of State John Foster Dulles. Dulles admitted to being 'deeply depressed' by 'the gathering momentum of the Soviet economic and political offensive in the developing regions', and at being 'forced to defend the interests of the United States with one arm tied behind his back: namely, the nation's economic strength'.⁴¹ Asked for a 'new idea', Jackson 'uncorked' his

³⁸ Commission on Foreign Economic Policy (1954).

³⁹ Eisenhower, 'Special Message to the Congress on Foreign Economic Policy', 30 March 1954. TAPP.

⁴⁰ Rostow, 'Notes on the Origin of the President's Speech of April 16, 1953', 11 May 1953. *FRUS*.

⁴¹ As told by Jackson to Rostow in Rostow (1985), p. 95.

World Economic Plan and proposed a conference at the Princeton Inn. On the day of Eisenhower's congressional speech, Jackson approached Millikan to assemble 'a representative group from within and outside government to see if a consensus could be established that development aid should be substantially increased, and to outline a plan to accelerate growth in the developing regions which could be used as a basis for a presidential initiative'.⁴²

A comparison of Jackson's description of the conference to Dulles, and the parallel private correspondence between Jackson, Henry Luce of TIME Magazine, Millikan and Rostow, contrasts its front and back stages. Writing to Dulles in April, Jackson conveyed his vision for the conference:

[A] group of the best people we can find should sit down for a weekend to consider the broad shape [a World Economic Plan] should take. On the basis of that discussion, we might designate a small drafting committee to prepare a proposal for submission to the group, possibly at another session to be held early in the summer. Then, if the group considers that a worthwhile plan has been outlined, will be the time to submit it to the government.⁴³

Simultaneously, he wrote to Luce with an entirely different plan for how events should unfold:

Millikan agrees with you that the actual Plan could be written in 48 hours out of the heads of two or three of us, without the conference stage setting. On the other hand, I feel that this little bit of theatre has a certain importance, and, on the basis of previous experience, will make a definite contribution.⁴⁴

Writing to Jackson a week later, Millikan echoed this:

Rostow and I believe that it will be desirable to have our thoughts pretty clearly in mind beforehand as to what we want to come out of this first meeting, but we feel that the thing

⁴² Excerpts from Jackson's diary entry from 25 March 1954. Quoted in *ibid.* p. 96.

⁴³ Jackson, 'Memorandum to the Secretary of State', 9 April 1954. Eisenhower Presidential Library.

⁴⁴ Jackson, 'Letter to Henry Luce', 9 April 1954. Eisenhower Presidential Library.

has got to be so stage managed that the other participants all believe that at least some the ideas were originally theirs.⁴⁵

Thus, the organisers consciously conceived of the conference as a performance of expertise to help ‘navigate the idea through the labyrinth of Washington bureaucracy, like a courtier working to gain an audience with the sovereign’.⁴⁶ The other attendees functioned as props rather than collaborative actors: unaware of the backstage, they merely lent gravitas to a foregone conclusion.⁴⁷ In this way, the organisers ensured that their preconceived narrative was adopted as the conference’s collective and final position, while convincing other participants that this was the product of a consensus arrived at during the conference.

To accomplish this, Jackson, Millikan and Rostow controlled the flow of information from backstage to front, and carefully managed how discussion unfolded. Jackson assured Eisenhower that the attendees would ‘have as raw materials to work with [a] considerable amount of ideas, papers and studies’.⁴⁸ The material actually distributed was more limited: a short paper by Jackson called ‘World Economic Policy: A simple outline of a great opportunity for the United States’, the initial memorandum that Jackson had written Dulles on April 9 proposing the conference, and papers by Millikan and Rostow which sketched out the Plan.⁴⁹

It was important, Millikan cautioned, to ‘permit the conference in its early stages to freewheel a good deal and to let individual members cook up and present their own reactions at some

⁴⁵ Millikan, ‘Letter to C.D. Jackson’, 15 April 1954. Eisenhower Presidential Library.

⁴⁶ O’Gorman (2009), p. 415. Credit goes to this author for identifying the previous two quotations.

⁴⁷ The full list of attendees can be found in Jackson, ‘Attendees — Princeton, May 15-16, 1954’, 14 May 1954. Eisenhower Presidential Library.

⁴⁸ Jackson, ‘Letter to Eisenhower’, 29 April 1954. *The Papers of Dwight David Eisenhower*.

⁴⁹ Armstrong (2000), p. 308. Reference to the circulation of the memo amongst the attendees can be found in Jackson, ‘Letter to Walt Rostow’, 17 May 1954. Eisenhower Presidential Library.

length before trying to crystallise a formula'. This would 'mobilise the really active participation of the members of the conference in trying to put the idea across afterward'.⁵⁰ To secure their objective, 'the group could then adjourn and a three or four man committee (guess who) could work up an [interim] draft' by the end of the first day.⁵¹ The interim draft was largely based on a 1952 paper by Rostow called 'Notes on a New Approach to U.S. Economic Foreign Policy'.⁵² This was presented to the attendees for ratification on the last day of the conference.⁵³ Afterwards, the organisers assumed control over its editing and delivery.

Performance: front stage

This performance of expertise had two acts: the Princeton Inn conference and its output, the Plan, which was used as an artefact by Jackson in direct appeals to senior officials.

The final Plan was written up by Millikan and Rostow, and delivered by Jackson to Dulles on July 23.⁵⁴ It first described 'The Crisis of 1954', precipitated by 'the loosing of the bonds of the Free World', and cited the loss of Indochina as a key example. The US had failed to react to this crisis appropriately, the authors claimed, because it had failed to understand 'its nature and causes': namely, that the underdeveloped areas had come to believe 'we no longer support economic and social advance for the benefit of the common man...but rather seek alliance with any partner...who will pledge military opposition to Russia'. The 'heavy military bias' of the Eisenhower administration's foreign policy had caused it to overlook economic

⁵⁰ Millikan, 'Letter to C.D. Jackson', 15 April 1954. Eisenhower Presidential Library.

⁵¹ Ibid.

⁵² Armstrong (2000), p. 308.

⁵³ Pearce (2001), pp. 57-58.

⁵⁴ Millikan and Rostow, 'Proposal for a New United States Foreign Economic Policy', 23 July 1954. Eisenhower Presidential Library. This document is identified as the final version in Rostow (1985), p. 96.

stagnation overseas as a key risk to American national security. This risk arose because economic growth was failing to keep pace with ‘the hopes and expectations of millions of men and women all over the world for expanded living standards and economic well-being’, which had ‘been aroused to a degree unique in history’. Rostow and Millikan predicted that ‘the desire to pass from primitive, stagnant economies to steady growth is so strong that...many areas will opt for Communism if development efforts under democratic regimes fall’. They noted that this ‘revolution of expectations’ been already been opportunistically seized on by the Soviets as ‘a principal lever of influence’.⁵⁵

To manage this risk, the Eisenhower administration needed to intervene with a ‘new foreign economic policy’, which would ‘reaffirm our responsibility for taking the lead in a partnership for world economic growth’. The policy’s primary purpose was to ‘remove the one bottleneck over which the underdeveloped countries cannot have much control: lack of capital’. Specifically, the Plan called for ‘a new long-term capital fund’ of \$10.5 billion in loans and grants, matched by other Western powers, and made available ‘without any military or political strings’. In an appendix, the authors calculated the amount of foreign capital required by countries in Asia, the Middle East, Latin America, and Africa, according to their stage of economic growth. The stages of growth model was refined in future publications; in the Plan, Rostow and Millikan proposed three: an initial period defined by ‘traditional low productivity techniques’ and ‘old values and institutions’; a ‘complex transition’ to ‘sustained economic growth’, catalysed by industrialisation and rising exports; and, finally, ‘the long stage of regular if fluctuating progress’ in which the need for foreign capital would cease entirely.⁵⁶

⁵⁵ Ibid.

⁵⁶ Ibid.

In implicating the US government as the actor responsible for intervening, the Plan constructed a dissonance between its responsibility for national security and the absence of long-term economic assistance for underdeveloped countries. Economic assistance was vital to helping these countries achieve self-sustaining growth. That, in turn, was an 'essential precondition' for creating an international environment in which the American way of life could flourish: 'we must free security from dependence on military strength...the achievement of steady economic growth is essential to such an environment'.⁵⁷

Jackson was responsible for selling the Plan in Washington. He drafted a presidential speech to launch the programme and circulated both documents widely among senior officials and legislators. His role in the performance was to show how the Plan was politically viable, and to leverage his personal connections to key decision-makers to pressurise them into action. Two days after presenting the Plan to Eisenhower, he penned a follow-up letter to the president, claiming that 'no individual, no committee, or agency engaged in this work can get anywhere unless they are constantly aware of the fact that *you* are setting the climate and *you* want something done'.⁵⁸ To Dulles, he acknowledged that 'the price tag would raise important political hurdles', but stressed that this should be 'dramatised' as an investment programme rather than a 'giveaway', differing substantially from the Marshall Plan's system of grants.⁵⁹ He also emphasised that the Plan would cost only 5 percent of annual expenditure on national security, and '1/7th of the normal increase in national income'.⁶⁰

⁵⁷ Ibid.

⁵⁸ The memorandum of that conversation may be available in the Eisenhower Presidential Library, however, the library was closed for long stretches during 2020-2021 due to the coronavirus pandemic, so I did not locate it. Jackson, 'Letter to Dwight D. Eisenhower', 13 August 1954. Eisenhower Presidential Library.

⁵⁹ Jackson quoted in Rostow (1985), pp. 102-103.

⁶⁰ Jackson, 'Letter to John Foster Dulles', 19 August 1954. Eisenhower Presidential Library.

Political effects

Though the Plan caused a stir in Washington, it eventually died an inglorious death in the desk drawers of officials who did not wish to be seen asking Congress or the Treasury for hand-outs. Some, like Dulles, privately agreed with its analysis that US foreign economic policy was piecemeal and inadequate. However, key audience members were unwilling to shoulder the political costs of lobbying for a policy that they expected institutional gatekeepers to reject. This was reflected in the reactions of Dulles, Eisenhower, and Joseph Dodge, who chaired the Council on Foreign Economic Policy.

Dulles told Jackson that, while ‘personally convinced that it is going to be very difficult to stop Communism in much of the world if we cannot...duplicate the intensive Communist effort to raise productive standards’, he could not become a ‘crusader’ for Jackson’s effort and do battle with the Treasury.⁶¹ The Treasury Secretary, George Humphrey, was a fervent advocate of fiscal restraint. He stipulated that the Treasury clear every State Department memorandum or telegram concerning monetary affairs.⁶² Dulles trod cautiously in areas like aid to avoid antagonising Humphrey and jeopardising his own influence with the president, which he jealously guarded.⁶³

Eisenhower’s reaction was also ambivalent. At the August meeting where Jackson presented the Plan, the president said that it was too ambitious. He rejected the role the Plan defined for the US, saying that ‘the country should be satisfied with “little steps” rather than the concept of world leadership’. He also admitted that ‘trying to sell it to Congress scared him’.⁶⁴

⁶¹ Jackson quoted in Rostow (1985), pp. 102-103.

⁶² Rabe (1988), p. 66; Allcock (2014), p. 93.

⁶³ Edgerton (1970), pp. 7-9.

⁶⁴ Eisenhower, ‘Letter to C.D. Jackson’, 16 August 1954. *Papers of Dwight David Eisenhower*.

This sentiment was repeated in his response to Jackson's subsequent letter. Here, Eisenhower praised the 'careful analysis' of Jackson's proposal, but noted that the 'breadth and depth' of the changes proposed would be 'difficult to sell' to Congress, which might interpret it as 'bigger and better give-aways'.⁶⁵

Jackson also appealed to Joseph Dodge, who bluntly refused to sanction rhetoric that would lead 'foreign countries to expect a great deal more from us than we could or would provide'.⁶⁶ At a follow-up meeting of senior officials to discuss the Plan, attendees agreed 'on the desirability of some such operation as described in the Jackson report and that U.S. aid to improve living conditions in South and Southeast Asia should rank with expenditures to support and maintain the military forces of friendly nations'.⁶⁷ However, conversation centred on the unwillingness of Congress to appropriate funds for foreign aid. By November, Jackson was lamenting the Plan's 'corridor status' to Millikan.⁶⁸ Further attempts to revive it in 1957 failed.⁶⁹

3. The foreign aid debates and the Development Loan Fund (1957-1958)

In 1957, the Eisenhower administration's foreign aid programme took centre stage as legislators prepared the authorisation and appropriation bills for the fiscal year 1958.⁷⁰ In the words of one commentator, 'it was the occasion for a resounding collision between a greatly intensified crusade to redirect and reinvigorate the programme, particularly in support of

⁶⁵ Ibid.

⁶⁶ Jackson quoted in Rostow (1985), p. 106.

⁶⁷ Lincoln, 'Memorandum of Conversation', 24 August 1954. *FRUS*.

⁶⁸ Jackson, 'Letter to Max Millikan', 2 November 1954. Eisenhower Presidential Library.

⁶⁹ Rostow (1985), pp. 121-124.

⁷⁰ The 1958 fiscal year ran from 1 July 1957 to 30 June 1958.

long-range economic development, and an equally determined campaign to bear down on the breaks'.⁷¹ The modernisation theorists entered the fray on the side of the former. The performances of expertise they undertook during this period extended the scientific narrative of the World Economic Plan into a monograph titled *A Proposal: Key to an Effective Foreign Policy* (hereafter *Proposal*). This was then repackaged as a study for the Senate Special Committee to Study the Foreign Aid Programme.

Concurrently, Rostow and Millikan collaborated with the International Development Advisory Board (IDAB), which advised the president and the International Cooperation Administration (ICA) on foreign aid programmes, to produce a report on economic assistance to underdeveloped areas.⁷² This gave the impression of two independent studies, commissioned by different branches of government, converging on one policy proposal, and masked how the same individuals exercised directive dominance. These efforts increased pressure on the Eisenhower administration to reconsider its approach to foreign aid for economic development. Specifically, it legitimised the Development Loan Fund, a policy initiative hatched by State Department officials. This was the closest the Eisenhower administration had ever come to implementing the scientific narrative of modernisation theory. However, the evisceration of the Fund by the House Appropriations Committee limited its impact on policy outcomes.

Historical background

The backdrop to these events was growing frustration with the existing economic assistance programme from both within and outside the administration. A major trigger was a shift in

⁷¹ Haviland (1958), p. 689.

⁷² Edgerton (1970), pp. 65-66.

Soviet strategy: ‘more guile and less force’, as Dulles described it.⁷³ Stalin’s successors placed greater emphasis on forging ties with post-colonial and non-aligned governments in Latin America, Asia, and Africa. Though their offers of expanded trade and technical assistance were limited by smaller coffers, by 1956 the prevailing view in Washington was that the Soviets had mounted a successful ‘economic offensive’ in developing countries at America’s expense.⁷⁴ In response, Eisenhower asked for a two-fold increase in the Mutual Security Programme’s budget for the fiscal year 1957, and for limited authority to make aid commitments beyond the annual cycle of appropriations. Both requests were rejected: conservative legislators, especially Southern Democrats, balked at the massive increase in expenditure, while liberals were disappointed by the bias towards military assistance.⁷⁵

Mounting discontent with the government’s lacklustre and inchoate strategy towards the developing world led the Senate to create a Special Committee to Study the Foreign Aid programme in July 1956. This was a subcommittee of the Senate Foreign Relations Committee (SFRC), a powerful gatekeeper in the protracted process of enacting foreign aid legislation. The Special Committee commissioned eleven reports from various non-governmental research outlets, including CENIS, plus a plethora of field reports on developing countries.⁷⁶ Increased congressional scrutiny led the Eisenhower administration to undertake its own review of foreign assistance. This took the form of two ‘citizens committee’ reports: one by the President’s Citizens Advisers on the Mutual Security Programme, chaired by Benjamin Fairless, and the other by the IDAB, chaired by Eric

⁷³ Hagen and Ruttan (1988), p. 5.

⁷⁴ Kaufman (1978).

⁷⁵ Edgerton (1970), p. 44-47.

⁷⁶ Haviland (1958), pp. 690-691.

Johnston. Given their overlapping remits, and the irritation of some IDAB members at having been passed over by Fairless, the two committees were natural rivals.⁷⁷

Performance: backstage

By mid-1956, Rostow and Millikan had extended the narrative in World Economic Plan into a book-length argument, and circulated an early draft of *Proposal* to policymakers. They sent copies to members of the Senate Foreign Relations Committee and the House Foreign Affairs Committee ‘with the thought that it might be of some use to them in the debates on the foreign aid bill’.⁷⁸ They also distributed the report to senior figures in the executive branch. These efforts to publicise *Proposal* were successful: it was covered enthusiastically by several major newspapers and given considerable airtime in congressional debates.⁷⁹ Throughout that summer, Millikan fielded seemingly unending requests for extra copies from private citizens, legislators, and officials from across government.⁸⁰

The success of *Proposal* generated further performance opportunities. That October, Millikan was invited to submit a leading study for the Senate Special Committee to Study the Foreign Aid programme — an invitation likely prompted by acting chairman Senator Fulbright’s reading of *Proposal* earlier in the year.⁸¹ Millikan was asked to explore the basic assumptions underlying existing economic assistance programmes, analyse their validity and conclusions, and ‘evaluate alternative objectives and consider criteria for measuring accomplishments’.⁸²

⁷⁷ Edgerton (1970), p. 70.

⁷⁸ Millikan, ‘Letter to Laurence Curtis’, 20 June 1956. MIT Institute Archives.

⁷⁹ For example, the *New York Times* ran a leading article on 20 May 1956 claiming that ‘officials at the highest levels of the Government are giving serious study to a privately prepared report on a major aspect of foreign policy’. Dale, ‘Report Bids U.S. Alter Aid Policy’, 20 May 1956. *NYT*.

⁸⁰ See the contents of Folder 356, Box 11, Max F. Millikan Papers, MC-0188, MIT Institute Archives.

⁸¹ Fulbright, ‘Letter to Max Millikan’, 7 June 1956. MIT Institute Archives.

⁸² ‘List of Proposed Projects’, n.d. MIT Institute Archives.

He asked eight members of CENIS faculty to contribute to the study: Rostow, Francis Bator, Richard Eckhaus, James Cross, Lucian Pye, Everett Hagen, Paul Rosenstein-Rodan, Charles Kindleberger. All were economists apart from Rostow, an economic historian, and Cross, a specialist in resistance movements and limited warfare.⁸³ At the time, CENIS was embroiled in controversy over its funding from the CIA.⁸⁴ Millikan was therefore extremely careful to maintain the boundary between the 'official' position of CENIS and MIT, and the government-funded research being conducted by its staff for the Senate. When negotiating contract details with Carl Macy, the SFRC's chief of staff, Millikan requested the insertion of a clause to clarify that 'neither the Massachusetts Institute of Technology nor the Centre for International Studies officially endorses the conclusions of the work done under their auspices'.⁸⁵

Proposal also brought Millikan and Rostow to the attention of Eric Johnston of the IDAB, who granted them special access to its review of the foreign aid programme. The mechanics of the IDAB were very different from the Fairless Committee's. Instead of a structured series of discussions to craft their position, IDAB members were invited to attend a series of seminars on various topics relating to development assistance by 'outstanding authorities', which included Millikan and Rostow.⁸⁶ After their first meeting in September 1956, each member was handed a copy of *Proposal*.⁸⁷ The next month, Millikan chaired a conference hosted by the IDAB on US foreign economic policy and objectives.⁸⁸ He and Rostow were then invited

⁸³ Millikan, 'Memorandum to Rostow, Bator, Eckhaus, Cross, Pye, Hagen, Rodan, Kindleberger', 1 October 1956. MIT Institute Archives; Millikan, 'Letter to Frances Velo', 18 September 1956. MIT Institute Archives.

⁸⁴ Armstrong (2000), pp. 254-256.

⁸⁵ Millikan, 'Letter to Mr. Carl Macy', 1 October 1956. MIT Institute Archives.

⁸⁶ Edgerton (1977), p. 71.

⁸⁷ Ibid. p. 72.

⁸⁸ Johnston, 'Letter to Max Millikan', 23 November 1956. MIT Institute Archives.

to comment on what the Board might include in its final report, and were given preliminary drafts to review.⁸⁹ In this way, the scientific narrative imparted in *Proposal* shaped the Board's output, even though Rostow and Millikan were never officially linked to it.

Performance: front stage

Proposal built on the themes of the 1954 World Economic Plan. I first describe the scientific narrative expressed in *Proposal*, and how it was repackaged into a format appropriate for a Senate study. Next, I explain how Max Millikan and Eric Johnston reinforced that narrative in their performances of expertise before the Senate Special Committee.⁹⁰

Proposal and the Senate study

The basic thesis of *Proposal* was that 'a much-expanded long-term programme of American participation in the economic development of the underdeveloped areas can and should be one of the most important means for furthering the purposes of American policy'. Millikan and Rostow identified two 'priority tasks' of US foreign policy: in the short-term, defending against Communism by maintaining military strength and reinforcing alliances; in the long-term, promoting 'the evolution of a world in which threats to our security...and our way of life are less likely to arise'. A shift in focus from the first to the second was critical, for 'we are in the midst of a great world revolution', as newfound independence and globalisation exposed 'previously apathetic peoples...to the possibility of change'.⁹¹

According to the two men, all national economies proceeded through three 'stages' of growth: pre-conditions for takeoff, in which 'the idea...that economic progress is possible' spread, but

⁸⁹ Schmeisser, 'Letter to Max Millikan', 5 October 1956; Millikan, 'Letter to Al Reifman', 13 September 1956. Both in MIT Institute Archives.

⁹⁰ Millikan testified on 20 March 1957, Johnston on 3 April 1957.

⁹¹ Millikan and Rostow (1957), Chapter 1.

‘traditional low-productivity techniques’ and ‘old values and institutions’ remained dominant; takeoff, a period of ‘complex transition’ characterised by rapidly expanding industry and higher rates of savings and investment; and, finally, self-sustained growth, by which time ‘some 10-20 percent’ of national income was reinvested in ‘expanding productive capacity’, and there was increased integration with the global economy. Indices were defined to gauge which stage a country was at: the average growth rate of per capita income, and its annual GDP-to-investment ratio.⁹²

The stages of growth model thus formalised the modernisation process outlined in the World Economic Plan, and served to prospect the future of developing countries. Self-sustaining economic growth, the authors claimed, would lead to politically mature societies which, in virtue of their modernity, would have interests that were compatible with America’s. Failure to achieve such growth risked a future in which ‘increasing numbers of people...become convinced that their new aspirations can be realised only through violent change and the renunciation of democratic institutions’.⁹³ This risk existed ‘even in the absence of the Communist apparatus’, but would be opportunistically exploited by the Soviets to augment their sphere of influence.⁹⁴

Millikan and Rostow assigned the US government responsibility for managing the risk of underdevelopment via a ‘long-term capital fund’ of \$10 billion, comprising both grants and loans. This was to be disbursed by a government organisation freed from the annual cycle of Congressional appropriations, made without political or military strings attached, and executed through national development programmes. The ‘scale and character’ of US

⁹² Ibid. pp. 43-54.

⁹³ Ibid. p. 5.

⁹⁴ Ibid. p. 6.

intervention depended on which stage a country was at, as this established its ‘absorptive capacity’, that is, its ability to ‘employ efficiently additional capital resources’. Thus, the pre-takeoff stage required technical assistance and infusions of capital in the form of grants; the takeoff stage required continued technical assistance and loans at favourable rates; at the self-sustaining stage, foreign capital was largely unnecessary.⁹⁵

The Senate study was structured differently from *Proposal*, and the language was less florid, but the scientific narrative contained within was essentially identical. As John Burchard, Dean of MIT’s School of Humanities and Social Sciences expressed it: ‘the group has done the research already and this simply amounts to reporting it in a somewhat different form’.⁹⁶ The study defined the national interest as the ‘political and physical survival of the United States’, and the ‘continued evolution’ of American society in accordance with its constitution. Foreign policy should aim to ‘foster a world environment’ that was ‘congenial’ to that development.⁹⁷ While the strategy of deterrence allowed the US to meet the Soviet threat, it did not address the equally important risk of underdevelopment.⁹⁸ In keeping with the conventions for a government-commissioned study, it pursued greater detail on the intervention proposed, expanding on the criteria for allocating aid to recipient nations, as well as how to measure the success of such contributions. Overall, it estimated that ‘a feasible and properly designed programme of American economic assistance could within two decades catalyse self-sustaining economic growth in most of the underdeveloped free world’.⁹⁹

⁹⁵ Ibid. Chapters 3-4.

⁹⁶ Burchard, ‘Memorandum to Admiral Cochrane’, 24 September 1956. MIT Institute Archives.

⁹⁷ Centre for International Studies (1957), p. 16.

⁹⁸ Ibid.

⁹⁹ Ibid. p. 20.

Testimonies before the Senate Special Committee

Millikan was the first witness to testify before the Special Committee on 20 March 1957. His opening remarks emphasised the neutrality of CENIS and MIT ‘on any issue of public policy confronting the United States Government’, stressing that the views expressed in the report were solely those of its authors.¹⁰⁰ After restating the scientific narrative of the CENIS study, he highlighted the importance of separating military from economic assistance in the US foreign aid regime. This, and allocating economic assistance according to strictly technical criteria (i.e., a nation’s ‘absorptive capacity’), would prevent countries from extracting aid through ‘political blackmail or by allegations of military threat’.¹⁰¹ Anticipating criticism about the increased cost of a long-term development fund, he stressed that it had a natural terminus: when the recipient countries attained self-sustaining growth.

Millikan’s performance was supported by Eric Johnston’s testimony before the same committee a fortnight later. In introducing the IDAB’s report, Johnston mentioned that the Board had consulted the Department of State and the ICA, but omitted CENIS’s role in shaping its content. Despite this, he drew liberally from the scientific narrative of modernisation theory. He characterised economic assistance as a form of ‘preventative medicine’ against the national security risks of underdevelopment: ‘economic growth...provides a major solvent for international tensions, a major source for national pride, a major incentive for stability and peace’. Failing to bestow such assistance would leave societies vulnerable to ‘subversion, manipulation or attack by the Soviet Bloc’. Like Millikan, he emphasised the importance of separating military from economic assistance, as well as

¹⁰⁰ ‘Statement of Max F. Millikan’, 20 March 1957. *Hearings Before the Senate Special Committee to Study the Foreign Aid Programme*. p. 2.

¹⁰¹ *Ibid.* p. 4.

offering the latter on a long-term basis. He went further and proposed permanent legislation to establish an international development fund.¹⁰²

Political effects

These performances of expertise, as well as the artefacts they drew on, impacted policy discourse and policymaking by encouraging the Special Committee to endorse the Development Loan Fund.¹⁰³ The DLF was the brainchild of the State Department's Policy Planning Staff, concocted at the same time as the citizens' committees were reviewing foreign aid policy. The DLF's main architects, Philip Trezise and Henry Owen, came up with the concept independently of Millikan and Rostow, but met with them frequently to discuss development assistance. They were also in contact with members of the IDAB.¹⁰⁴ It is no surprise, therefore, that these three groups converged in their criticisms of the existing foreign aid programme, and proposed similar measures to remedy it.

Senator Fulbright's support for a long-term development fund was already evident in his exchanges with Millikan and Johnson after their testimonies. News of his enthusiasm reached Dulles before his own appearance before the Committee in early April. Keen to avoid confrontation with the Senate Democrats, Dulles, who until then had remained aloof from his subordinates' efforts to devise the DLF, announced the initiative in his own testimony.

¹⁰² 'Statement of Eric Johnston', 3 April 1957. *Hearings Before the Senate Special Committee to Study the Foreign Aid Programme, 85th Congress, 1st Session.*

¹⁰³ The terminology is slightly confusing as the IDAB, CENIS, and Senate Special Committee all recommended the formation of a 'development loan fund', with minor variations as to its specific form. 'Development Loan Fund' refers to the policy proposal by the Policy Planning Staff only.

¹⁰⁴ Edgerton (1970), p. 77.

The DLF was then resoundingly endorsed by the Special Committee's final report, which accorded with the scientific narrative expressed in CENIS's study.¹⁰⁵

This advocacy led Eisenhower to overrule the objections of Treasury Secretary Humphrey and make the DLF a prominent part of his mutual security request to Congress for the fiscal year 1958.¹⁰⁶ Although he did not employ tropes of modernisation theory, such as self-sustaining growth, his justification for economic assistance was grounded in its scientific narrative. Newly independent countries, having endured centuries of 'poverty and hopelessness', were now 'fixed upon raising their standards of living', but lacked sufficient 'technical know-how and capital'. Economic assistance was vital to the emergence of prosperous societies in the world's peripheral regions, and 'insured' the US against the opportunistic exploitation of deprivation by the USSR.¹⁰⁷ His proposal for the DLF broadly aligned with the conclusions of the CENIS study. He recommended that the Fund be established within the ICA, with \$2 billion in appropriations across three years to guarantee an 'assurance of continuity' to borrowing countries. There were to be no grants, but loans could be repaid in dollars or local currencies, providing greater flexibility than existing lending institutions like the Export-Import Bank.¹⁰⁸

This marked a turning point in the Eisenhower administration's foreign aid strategy: a clear demarcation had been made between military assistance and economic assistance, with each assigned distinct, but complementary, roles in maintaining national security. Economic assistance was legitimated on the basis that it managed the national security risk of

¹⁰⁵ Ibid. pp. 127-133.

¹⁰⁶ Kaufman (1982), pp. 103-104.

¹⁰⁷ Eisenhower, 'Special Message to the Congress on the Mutual Security Programs', 21 May 1957. TAPP.

¹⁰⁸ Ibid. See also Kaufman (1982), p. 106.

underdevelopment. However, the DLF did not dramatically change how the US *practiced* foreign aid. Policy initiatives that cannot be implemented unilaterally by the executive can be attacked by the legislature, and the DLF was maimed by the authorisations and appropriations process in Congress, where the Democrats had strong majorities in both houses. At the urging of the Senate Foreign Relations Committee and the House Foreign Affairs Committee, several hundred million was deducted from the DLF's authorisation for the fiscal years 1958 and 1959. It was further crippled by the House Appropriations Committee, which reduced appropriations to \$300 million in 1958.¹⁰⁹ This was a resounding defeat for the administration, as well as for the modernisation theorists and their allies. As a White House statement put it: 'The cut in the development loan fund — a forty per cent cut — makes impossible the realisation of the important purpose for which this fund was established by the Congress'.¹¹⁰

4. SFRC hearings and the Kennedy-Cooper Resolution (1958-1959)

Marginalised by the executive, the modernisation theorists at CENIS began looking for alternative apertures into the policymaking process. 1958 marked the beginning of a productive partnership between CENIS and the young, ambitious Senator John F. Kennedy. Kennedy and his legislative assistant, Fredrik Holborn, directed Rostow's performance of expertise before the SFRC in early 1958. The front stage of this performance accorded with the conventions of congressional committee hearings: experts being consulted to give impartial advice to senators to help them reach reasoned conclusions. Backstage, Rostow, Holborn and Kennedy plotted to underscore the inadequacies of the Eisenhower

¹⁰⁹ Republican Senator H. Alexander Smith quoted in Kaufman (1982), p. 110. See also pp. 104-109.

¹¹⁰ 'White House Press Release', 15 August 1957. *Public Papers of the Presidents of the United States: Dwight D. Eisenhower, 1957*.

administration's approach to developing countries through prepared questions. Kennedy would then reference Rostow's testimony during his speeches — also penned by Rostow — on the Senate floor to launch the Kennedy-Cooper resolution, which proposed to support India's Second and Third Five Year Plans. The argument for increased aid to India was grounded in the claim that she was on the cusp of take-off into self-sustained economic growth. The Kennedy-Cooper resolution initially failed to pass, but succeeded the next year, upon encountering a more favourable political climate.

Performance: backstage

Elected to the Senate in 1956, Kennedy built his reputation in international affairs through a series of searing attacks on the Eisenhower administration's foreign policy. Kennedy often drew on expert advice, though 'in foreign affairs he was more of a shopper than he was beholden to a single policy expert'.¹¹¹ One such shopping excursion in November 1957 brought his legislative assistant, Frederick Holborn, to CENIS, which was then researching Indian economic development.¹¹² In February 1958, Kennedy met Rostow for the first time, and invited him to contribute to an upcoming Senate speech on foreign aid to India: 'Kennedy saw India as a perfect weapon for attacking the Eisenhower administration for insufficient vigour in prosecuting the global struggle against Communism', while burnishing his liberal credentials.¹¹³

To lay the groundwork for this speech, Kennedy leveraged his membership of the Senate Foreign Relations Committee, which was reviewing the government's foreign policy. To

¹¹¹ Oliphant and Wilkie (2017), p. 94.

¹¹² Holborn was himself recruited from Harvard. See Rostow, 'Recorded interview by Neustadt, R.E.', 11 April 1964. John F. Kennedy Presidential Library (hereafter Kennedy Presidential Library).

¹¹³ Engerman (2018), p. 179.

inform its deliberations, the SFRC held hearings, inviting a broad spectrum of individuals to first testify, then respond to questions. Congressional hearings are purportedly fact-finding exercises which help the relevant committee reach a measured verdict. The reality is more complex. Hearings are ‘the most orchestrated phrase of policymaking and are usually part of any overall strategy’ to pass legislation.¹¹⁴ Senior administration officials are often called as witnesses, but so are academics, scientists, and interest group representatives. Committee members frequently nominate witnesses whose testimony corroborates their own policy positions. Helped by staff researchers and aides, they rehearse questions and answers with witnesses prior to the hearing. The committee chair is able to determine who appears in what order, and how long they may speak for. This degree of backstage orchestration does not imply that the front stage of the committee hearings have no independent effect on policy outcomes. They can be dramatic public spectacles that elevate issues to national prominence. For participants, they are an opportunity to build support, counter opposing views, and set the terms of the debate.

Kennedy, Rostow and Holborn coordinated Rostow’s appearance before the Committee in March 1958. Through Holborn, Rostow requested that Kennedy ask him a question about financing ‘an enlarged foreign economic development programme during the period of economic pressure and recession which we are in’: ‘he has found this to be the most serious barrier in thinking about foreign assistance...and feels that he can come up with a constructive and reassuring answer’.¹¹⁵ In this performance of expertise, Kennedy played the

¹¹⁴ Oleszek et al. (2016), p. 120.

¹¹⁵ Holborn, ‘Memorandum to John F. Kennedy’, n.d. Kennedy Presidential Library.

skill: 'It obviously [had] something of the character of a put-up job, designed to build materials into the record that he could, and did, later use', Rostow later recalled.¹¹⁶

Performance: front stage

Rostow's testimony analysed the Soviet Economic Offensive in the developing world and its implications for the United States. He opened with a version of the scientific narrative contained within *Proposal*. The underdeveloped areas comprised 'transitional societies' that stood somewhere between agrarian stasis and being 'capable of applying...the fruits of modern science to its natural and human resources'. He identified nationalism as the greatest engine of modernisation; the challenge for leaders of transitional societies was to 'link nationalist fervour and the new centralised state to programmes of economic and social substance'. The undesirable future was a diversion of resources and energy away from this task and into what he termed 'bloody-shirt nationalism': 'an obsessive concern to redress real or believed past humiliations'. The Soviets encouraged the latter outcome, as citizens whose 'hopes for improved welfare are frustrated' would be more likely to turn to Communism. The Soviet Economic Offensive was a ploy to build goodwill, but did not provide amounts of aid and technical assistance sufficient to mount a 'serious economic development effort'.¹¹⁷

At a pivotal moment of 'birth, infancy, and adolescence for many nations', a new approach to foreign economic policy was needed in order to nurture 'democratically oriented states which have built economic growth into their societies as a regular condition'. The US should intervene with a 'positive economic programme in the free world sufficiently large and sustained to take these nations over the hump into sustained growth', as those societies would

¹¹⁶ Rostow (1972), p. 106.

¹¹⁷ 'Statement of W.W. Rostow', 27 February 1958. *Review of Foreign Policy: Hearings Before the United States Senate Committee, 85th Congress, 2nd Session*, pp. 269-291.

naturally have ‘high immunity to Communist tactics and Communist appeal’. Doing so required ‘an American economic development effort larger in scale, greater in continuity...and economically more hardened, than our present programmes’.¹¹⁸

The prepared exchange between Rostow and Kennedy provided an opportunity to expand on the proposed intervention, highlight the deficiencies of the Eisenhower administration’s approach, and add arguments that Kennedy would use in his later speeches on aid to India to the public record. The Senator asked disingenuously, ‘Do you think that the proposed economic assistance which the administration has decided to give to India is sufficient to meet the minimum requirements for successful Indian development and American policy in that area?’ Rostow replied that the present aid programme was ‘grossly inadequate’, and estimated a requisite amount of \$500 million. He then delivered a detailed comparison of Indian and Chinese economic development, noting that China was pulling ahead because it was investing a larger proportion of its GNP in industry. Success in India, he predicted, would spark ‘a transformation in attitudes from the outer islands of Indonesia to Morocco’.¹¹⁹ This sweeping statement only made sense in the context of a narrative that claimed to be universally applicable, rooted in the assumption that economic progress governed political sentiment.

Political effects

Days after testifying, Rostow penned Kennedy’s Senate speech introducing the Kennedy-Cooper Resolution to the Mutual Security Act: ‘The Choice in Asia — Democratic Development in India’. Decrying ‘the lack of vision and purposefulness with which we have approached the problems of the underdeveloped world’, it juxtaposed Indian independence

¹¹⁸ Ibid.

¹¹⁹ Ibid.

against China's turn to Communism, claiming that India 'stands as the only effective competitor to China for the faith and following of millions of uncommitted and restless peoples'. Highlighting the perilous position of India's Second Five Year Plan, Kennedy averred that 'the Indian economy has reached a crucial and precarious point of success or failure' comparable to that of postwar Europe. Citing the recent congressional testimony of 'Prof. W.W. Rostow', he identified Western and US interests in supporting 'the emergent uncommitted nations of the world' in 'programmes of real economic improvement' regardless of their formal alliances, as their 'economic transition will...quite likely cast the historic setting of the next generation'. Economic development, he concluded, was 'the only basis on which Asian and African nations can find the political balance and social stability which provide the true defence against Communist penetration'.¹²⁰

The Kennedy-Cooper resolution proposed to contribute approximately \$3 billion in long-term economic assistance to India, plus support for its Second and Third Five Year Plans.¹²¹ Although it narrowly passed the Senate, the resolution was defeated in the House. Kennedy and Cooper attempted again in February 1959. Kennedy's accompanying speech, also authored by Rostow, braided the Development Loan Fund and the Kennedy-Cooper Resolution into a single theme, 'The Economic Gap': the growing disparity between rich and poor nations which presented 'our most critical challenge today'. Kennedy now portrayed India as falling steadily behind China, hindered by a growing population and bad harvests. As India was at the stage of economic take-off, 1959 presented an opportunity which might never return: 'her population, her economy, her absorptive capacity, her own efforts, and her

¹²⁰ Kennedy, 'The Choice in Asia — Democratic Development in India', 25 March 1958. Kennedy Presidential Library.

¹²¹ Rostow (1985), p. 10.

administrative structure combine to deserve our firm commitment this year'. Whether India's economic performance could outpace China's was 'in large measure for this Congress to decide...[The US] sits on a "conspicuous stage" and the whole world marks our demeanour...in this Congress we have an opportunity to be worthy of that role'.¹²² Kennedy framed his resolution as utilising a pre-existing solution, the Development Loan Fund, attacked Congress for its emasculation, and called for a long-range view: 'the alternative is chaos, not economy, a continuing of ad hoc crisis expenditures...an over reliance on inflexible, hard loans...and a general pyramiding of overlapping, standardless, incentiveless, inefficient aid programmes'.¹²³ Rectifying this would become a major theme of Kennedy's presidential campaign.

Encountering a more favourable political climate, the revised resolution passed. In Congress, a Democratic majority obtained in the House and Senate, fiscally-conservative legislators were replaced by more liberal ones, and Representatives Chester Bowles and Chester Morrow added their names to the resolution.¹²⁴ The precedent set by the Development Loan Fund and the Inter-American Development Bank, plus the prescient allusion to the former in 'The Economic Gap', aligned the resolution with the direction of the incumbent administration. The State Department offered support in negotiations, provided that the language was amended to include all of South Asia, in keeping with the extant policy of not distinguishing any country for special treatment.¹²⁵

¹²² Kennedy, J.F. 'The Economic Gap', 19 February 1959. , Kennedy Presidential Library.

¹²³ Ibid.

¹²⁴ Rostow (1985), Chapter 10.

¹²⁵ Macomber, 'Letter to Senator J. William Fulbright', 4 May 1959. Kennedy Presidential Library.

5. Kennedy's presidential campaign and the origins of the Alliance (1960)

The partnership between Kennedy and CENIS academics became a core component of Kennedy's 1960 presidential campaign. While Kennedy's campaign performances cannot be considered performances of expertise, they are significant for two reasons. First, they demonstrate the absorption of a scientific narrative into campaign rhetoric, a process made possible by CENIS faculty, especially Rostow, working behind the scenes as part of Kennedy's team.

Second, the Alliance was conceived on Kennedy's campaign trail, from an opportunistic marriage of a scientific narrative to an adventitious catastrophe: the 'loss' of Cuba to Communism in mid-1960. While Kennedy's zeal for overhauling the US foreign aid programme predated his bid for the presidency, his interest in Latin America did not. By several accounts, he knew little of the region: as late as February 1960 he claimed that a regional economic development programme would be a 'mistake'.¹²⁶ As Castro nationalised the Cuban economy, expropriated US holdings, and made overtures to the Soviet Union, Kennedy and his advisors changed their position, seizing the opportunity to attack the Eisenhower administration and Nixon for being 'soft' on Communism. Kennedy identified continued underdevelopment as a serious risk to US national security: 'Although the Cold War will not be won in Latin America, it could very well be lost there'.¹²⁷ He portrayed Latin America as 'a vast continent in the midst of a vast revolution...a continent at the crossroads, which must choose' between democratic or autocratic modernisation.¹²⁸ The scientific narrative of modernisation theory enabled him to attribute Castro's ascent to the Eisenhower

¹²⁶ Kennedy, 'New Approach to Latin America', 12 February 1960. Kennedy Presidential Library.

¹²⁷ Kennedy, 'Remarks of John F. Kennedy, Cincinnati, Ohio', 6 October 1960. Kennedy Presidential Library.

¹²⁸ Kennedy, 'The President's South American Tour', 6 March 1960. Kennedy Presidential Library.

administration's inadequate response to Cuban demands for economic development, and to argue that a similar neglect of the entire region would elicit similarly dire consequences, unless the US intervened with a new programme to help Latin American economies achieve self-sustaining growth.

Historical background

To contextualise Kennedy's campaign rhetoric, it is necessary to explain the Eisenhower administration's position on foreign aid for economic development to Latin America. Officials in both the Truman and Eisenhower administration regularly made public affirmations of hemispheric unity, but refused to underwrite that unity economically.¹²⁹ Although Eisenhower criticised his predecessor for neglecting the region, he wanted to reverse the government's 'come and get it' attitude towards Latin American states: if they 'want our money', he said, 'they ought to be required to go after our capital'.¹³⁰ This view was enshrined in NSC 144/1, which established the administration's regional approach: it acknowledged the intense pressure on governments to improve living standards for their peoples 'to arrest the drift in the area toward radical and nationalistic regimes', but limited the US's role to 'the creation of a climate which will encourage private investment', continuing IBRD and EIB hard loans, lowering trade barriers, and providing technical assistance.¹³¹ Treasury Secretary Humphrey restricted the EIB's lending powers to short-term credits to expand trade, and

¹²⁹ Long (2015), p. 27. Argentina was the only country that did not support the Allied war effort.

¹³⁰ Eisenhower quoted in Rabe (1988), p. 65.

¹³¹ National Security Council. 'United States Objectives and Courses of Action with Respect to Latin America', 18 March 1953. *FRUS*.

development loans to Latin America plummeted from \$150 million in 1952 to \$7.6 million in 1953.¹³²

In January 1956, the Soviet Union announced an economic offensive in Latin America by offering to extend technical assistance and improve trade relations.¹³³ US policymakers regarded this as ‘the Soviet Union’s most important policy statement on Latin America to date’, and recognised ‘the need to associate the United States with the aspirations of the Latin American people to a greater extent’.¹³⁴ Their immediate response was threefold. First, they supported an International Coffee Agreement, seen as ‘something new that does not involve broad grant aid [or] soft loans’.¹³⁵ Second, they increased the credit available under the Export-Import Bank, fulfilling a promise made in 1954, although this was to encourage private investment, not replace it. Third, they bolstered the Organisation of American States (OAS) by proposing an Inter-American Committee of Presidential Representatives to discuss economic issues. This substituted multilateral talk for unilateral action: it mollified Latin Americans by reaffirming US sympathies for their economic woes, and deterred the Soviets from making further advances, but did not commit the US to actual policy change.¹³⁶

The minor concessions to counter the Soviet Economic Offensive greatly raised the expectations of Latin American leaders for a ‘Marshall Plan for the Americas’. When these expectations went unmet, President Kubitschek of Brazil personally lobbied Eisenhower for a major development fund under the banner of ‘Operation Pan-America’, then requested

¹³² Rabe (1988), p. 66.

¹³³ See Sewell (2008).

¹³⁴ National Security Council. ‘National Security Council Progress Report (NSC 5432/1)’, 28 March 1956. *FRUS*.

¹³⁵ Assistant Secretary of State for International Affairs Henry Holland to Dulles, quoted in Sewell (2008), p. 856.

¹³⁶ Sewell (2015), pp. 78-81.

\$1.2 billion in assistance through Nixon.¹³⁷ However, American officials were preoccupied with the possibility of Communist subversion and espionage, despite not regarding this as an imminent threat. They also rejected Kubitschek's diagnosis that underdevelopment was the primary reason for regional instability.¹³⁸

In May 1958, Vice-President Richard Nixon took an ill-fated tour of Latin American capitals, where he was jeered at and spat on by angry crowds. Kubitschek used the opportunity to attempt another launch of Operation Pan-America. In an *aide-mémoire*, he called for 'recognition of underdevelopment as a pan-American problem', endemic due to declining terms of trade for the export of raw materials.¹³⁹ His staff framed these demands in terms of a superpower struggle, noting 'the growing emphasis on economic aspects of the conflict indicates an opportunity to raise the argument that the fight against underdevelopment in Latin America constitutes a global strategy for the West'.¹⁴⁰

This time, US policymakers were less overtly dismissive. Dulles agreed that 'economic development can strengthen [the] ability of [Latin American] nations to resist communist subversion', but refused to accept that the US was responsible for facilitating that development.¹⁴¹ Once it became clear that Kubitschek was angling for a 'massive aid effort to counter Latin American poverty', he back-pedalled, emphasising that Communism demanded a political as well as an economic solution (for example, in the form of

¹³⁷ Eisenhower (1963), p. 202.

¹³⁸ Long (2015), pp. 33-34. In a meeting between Brazilian Vice-President Goulart and Assistant Secretary Holland, Goulart claimed 'Communism finds a favourable climate in Brazil because of certain conditions, among which is the low standard of living of a large number of the population'. To which Holland replied, 'this was quite true but that there was another front on which we must be vigilant, that where we combat the clandestine espionage and subversive organisation of communism'. Rubottom, 'Draft of a Memorandum of a Conversation, President Kubitschek's Residence, Rio de Janeiro', 10 June 1958. *FRUS*.

¹³⁹ Long (2015), p. 42.

¹⁴⁰ Quoted in *ibid.*, p. 45.

¹⁴¹ Dulles, 'Telegram from the Department of State to the Embassy in Brazil', 20 June 1958. *FRUS*.

collaboration between security agencies), and that ‘use of government capital should be the exception, not the rule’.¹⁴² He rejected the central thesis of Kubitschek’s aide-memoire, criticising its discussion of development for being too ‘mechanistic’.¹⁴³

Major personnel changes would allow the US to announce its support for the formation of an Inter-American Development Bank (IADB) in mid-August: the retirement of Treasury Secretary Humphrey, and the absence of Dulles due to illness.¹⁴⁴ Their successors, Robert Anderson and Clarence Dillon, were more flexible regarding foreign aid. A regional lending institution had been proposed at the 1957 Rio Economic Conference, but the US had only agreed to study such an organisation.¹⁴⁵ On the surface, the IADB was a triumph for Kubitschek and his vision of Pan-American unity. Its structure suggested otherwise: most funds came in hard loans, with soft loans playing a ‘secondary role’. Whereas Kubitschek had hoped for an initial capitalisation of \$5 billion, the US agreed to only \$1 billion, contributed by all American states. Finally, the IADB was expected to be able, in time, to raise capital through issuing bonds in the private securities market.¹⁴⁶ Therefore, the Eisenhower administration’s response to Operation Pan-America did not deviate from existing doctrine.

¹⁴² Rubottom and Briggs, ‘Memorandum of a Conversation, Laranjeiras Palace, Rio de Janeiro’, 5 August 1958. *FRUS*; Cottam, ‘Memorandum of a Conversation, Brazil Foreign Office, Rio de Janeiro’, 5 August 1958. *FRUS*.

¹⁴³ Dulles, ‘Letter From Secretary of State Dulles to President Kubitschek’, 7 August 1958. *FRUS*.

¹⁴⁴ Allcock (2014).

¹⁴⁵ Long (2015), p. 48. Dulles had opposed the IADB in 1957. See Minnich, ‘Minutes of a Cabinet Meeting, The White House, Washington’, 23 August 1957. *FRUS*.

¹⁴⁶ Dillon, ‘Circular Telegram from the the Acting Secretary of State to all Diplomatic Posts in the Other American Republics’, 21 December 1958. *FRUS*.

Performance: backstage

Kennedy involved prominent liberal academics from the outset of his campaign.¹⁴⁷ Two of his aides, Holborn and Deirdre Henderson, initiated and maintained relationships with scholars, eliciting a steady supply of memoranda, position papers, speech proposals and articles for the senator. They mustered Kennedy's thirty-strong Academic Advisory Committee (AAC), which debuted in December 1959 to much media fanfare.¹⁴⁸ A month later, Henderson arranged for an intimate meeting between its members and the senator, who appealed for 'the kind of advice you would give a man who may have to bear the responsibility of the Presidency'.¹⁴⁹ Such advice was deemed valuable, as this was the first election where the Democratic nomination process was dominated by the primaries, necessitating intense state-by-state campaigning and triggering 'an insistent, relentless demand for ideas, something plausible to say, some defensible position to take on every conceivable issue'.¹⁵⁰

In foreign policy, Kennedy found that he had 'the readiest response and [the] most help' from CENIS, and 'Rostow was more responsible for this than any other'.¹⁵¹ From the fall of 1957, CENIS researchers generated a 'steady flow of analytic material [and] responses to specific questions' for the senator, and several served on the AAC or otherwise directly contributed to the campaign.¹⁵² However, CENIS leadership was careful to maintain the boundary between political activism and scientific study. Though Max Millikan would privately and repeatedly offer the services of CENIS staff to Kennedy from early 1959 onwards, he would

¹⁴⁷ Lincoln (1965), p. 200.

¹⁴⁸ Wood (1993), pp. 49-50.

¹⁴⁹ Rostow, 'Recorded interview by Neustadt, R.E.', 11 April 1964. Kennedy Presidential Library.

¹⁵⁰ Wood (1993), p. 47.

¹⁵¹ Holborn, 'Recorded interview by Stuart, J.F.', 20 February 1967. Kennedy Presidential Library.

¹⁵² Rostow (1985), p. 71.

not, as its director, publicly endorse him.¹⁵³ Turning down one such request, he said: 'believe it unwise for director [of a] nonpartisan organisation devoted to foreign policy research to endorse publicly either candidate. Eager to help in any way...but regret [that I] cannot authorise use [of my] name'.¹⁵⁴

The CENIS academics, particularly Rosenstein-Rodan, Millikan, and Rostow, collaborated closely with Richard Goodwin, a foreign policy speechwriter and Kennedy's in-house expert on Latin America. Through Goodwin, the scientific narrative of modernisation theory and the notion of the US as 'partner' of the underdeveloped areas suffused Kennedy's statements on foreign aid in general, and Latin America in particular.¹⁵⁵ His campaign strategy called for a 'Full Partnership in Progress', which 'grasps the idea...of a new deal in the underdeveloped countries. Let us see our role not as leaders but as partners. We will identify the young leadership of the United States with the destiny of the young countries abroad...This is the answer to those who preach about imperialism'.¹⁵⁶ Emphasising partnership over leadership in economic development placed final responsibility for attaining it in the hands of the underdeveloped countries themselves. Framing the US government's intervention in this manner forestalled accusations of neocolonial meddling, as well as uncontrolled spending, and rendered the possibility of a major increase in foreign aid expenditures more purposeful and palatable.

¹⁵³ Millikan, 'Letter to John F. Kennedy', 6 February 1959; Millikan, 'Letter to John F. Kennedy', 3 March 1959. Both in Kennedy Presidential Library.

¹⁵⁴ Millikan, 'Telegram to Max Kampelman', 10 March 1960. Kennedy Presidential Library.

¹⁵⁵ Pearce (2001), p. 24.

¹⁵⁶ Goodwin, 'Memorandum: Campaign Strategy, 1960', n.d., Kennedy Presidential Library.

Performance: front stage

Kennedy's speeches to voter audiences attributed the 'loss' of Cuba to a Republican administration's neglect of its economic development. Rostow and Millikan's version of modernisation theory enabled him to portray Latin America, despite its internal diversity, as confronting a single, world-historic choice between democratic and autocratic modernisation. He identified US development assistance as the key determinant of which path would be followed. The Communist takeover of Cuba highlighted the perils of continued inertia, which the Soviet Union would leverage to expand their influence in America's backyard.

Kennedy delivered his first campaign address on Latin America just before Eisenhower embarked on a tour of the region in March 1960. Calling for a 'new approach', and reviving Rostow's 'economic gap' trope, he lambasted the incumbent administration's neglect of a 'vital area' through 'inconsistent, inconsiderate and inadequate economic and diplomatic policies':

No other area is more strategic to our national security and our economic progress. Only a tiny portion of our foreign aid budget has gone to this area which...is also plagued by poverty, instability, anti-Americanism and a growing Communist economic offensive...and too much of even this small bit of aid has been in the form of military assistance.¹⁵⁷

Kennedy continued his attack after Eisenhower's return. He warned that behind the President's warm reception lay 'the same unsolved problems...the same disappointed hopes...which resulted in the violent attacks on Vice President Nixon'. He imported from modernisation theory the concepts of a 'revolution of rising expectations' and the 'choices' it entailed, and described Latin America as 'a vast continent in the midst of a vast revolution...a continent at the crossroads, which must choose'. Observing that each of the countries visited

¹⁵⁷ Kennedy, 'New Approach to Latin America', 12 February 1960. Kennedy Presidential Library.

by the president — Brazil, Chile, Argentina and Paraguay — was stagnating and seeing ‘their dreams of productivity — of a better life — being bitterly frustrated’, he attributed this to a dearth of external capital and economic assistance.¹⁵⁸

By mid-1960, moderate goodwill towards Fulgencio Batista’s usurper had given way to outrage as Castro nationalised the Cuban economy, expropriated US holdings, and made overtures to the Soviet Union.¹⁵⁹ Kennedy’s aides altered their strategy, making ‘the “issue of Cuba” a major staple of our campaign...in dozens of speeches we assailed Nixon and the Republicans for losing Cuba to our communist adversaries’.¹⁶⁰ Riffing off modernisation theorists’ diagnosis of Communism as a ‘disease of the transition to modernity’, Kennedy explained ‘the transformation of Cuba from a friendly ally to a Communist base’ in terms of US support of a repressive dictatorship, and failure to recognise and meet Cuba’s ‘desperate need for economic progress’:

Nearly all our aid was in the form of weapons assistance...which completely failed to advance the economic welfare of the Cuban people...Mr. Nixon could not see then what should have been obvious...that unless the Cuban people, with our help, made substantial economic progress, trouble was on its way...It was our own policies — not Castro’s — that first began to turn our former good neighbours against us...Soviet imperialism had captured a movement which had originally sprung from the ideals of our own American Revolution.¹⁶¹

Ascribing the ‘loss’ of Cuba to US failure to adequately promote economic development allowed Kennedy to implicate the whole region in the same process. ‘The great tragedy today’, he concluded,

is that we are repeating many of the same mistakes throughout Latin America. The same grievances — the same poverty and discontent and distrust of America which Castro rode

¹⁵⁸ Kennedy, ‘The President’s South American Tour’, 6 March 1960. Kennedy Presidential Library.

¹⁵⁹ Schoultz (2009).

¹⁶⁰ Goodwin (1988), p. 124.

¹⁶¹ Kennedy, ‘Remarks of John F. Kennedy, Cincinnati, Ohio’, 6 October 1960. Kennedy Presidential Library.

to power are smouldering in almost every Latin Nation...Today time is running out in Latin America. Our once firm friends are drifting away. Our historic ties are straining under our failure to understand their aspirations.¹⁶²

As election day approached, the ‘partnership’ with the developing world was upgraded to an ‘Alliance’ in Latin America. As Goodwin recalls,

The fall of Cuba and the disastrous Nixon trip had transformed Latin America...into a major arena of foreign policy debate. It was not enough to condemn the Republican ‘loss’ of Cuba; we also needed an affirmative statement of Kennedy’s hemispheric intentions...to dramatise the policy, we needed a name...It should be in Spanish, I thought, to demonstrate that we envisioned not another exercise in generous paternalism, but partnership, a joint venture in democratic reform.¹⁶³

On 18 October, Kennedy announced the Alliance in a widely-distributed speech in Tampa, Florida, that drew heavily on the scientific narrative of modernisation theory. He highlighted the dissonance between the Eisenhower administration’s inaction over Latin American economic development, its responsibility for national security, and the US’s status as a regional power. The Republicans were fostering an emerging regional crisis by supporting dictatorships, remaining apathetic towards the ‘revolution of rising expectations’, and neglecting ‘the problems of the people to the south’. Remarking that ‘in the past 8 years we have sent less than 5 percent of our economic aid’ to the region, Kennedy recited a litany of US policy failures: refusal to enter into commodity stabilisation agreements, stalling the IADB, and rejecting Operation Pan-America. The US approach to economic assistance thus far was wholly inadequate: ‘nearly all our economic aid had been in the form of loans to buy American exports...as a result...a crushing burden of interest payments was imposed on Latin America’. ‘Only the leadership of the [US] can summon all the resources of the

¹⁶² Ibid.

¹⁶³ Goodwin (1988), p. 108.

hemisphere to the defence of freedom', he surmised, 'we have failed to exercise that leadership'.¹⁶⁴

Kennedy then called for 'an alliance in progress — an alliance of nations with a common interest in freedom and economic advance in a great common effort to develop the resources of the entire hemisphere'. It entailed regular consultation with Latin American governments, strengthening regional multilateral institutions, and 'constant and unequivocal support to democracy'. Most important was a new economic approach to the region, especially 'long-term development loans, essential to a growing economy'. In 'full cooperation with the Latin American States', the US would fund infrastructure projects 'on which a modern economy depends...[but] which private investment cannot provide'. It would also expand technical assistance, undertake commodity stabilisation agreements, and encourage programmes of land reform.¹⁶⁵

6. The Task Force on Immediate Latin American Problems (1960-1961)

The Alliance was policymaking in reverse: although an important pillar of Kennedy's presidential bid, it was little more than an attractive title and a vague set of promises. After the election, a Task Force on Immediate Latin American Problems was created to transform the Alliance into a concrete programme of action before Kennedy's inauguration. The Task Force gave the impression of serious experts engaged in serious business, reflecting the incoming administration's determination to define a 'new approach' to Latin America. In reality, it was a loose affair, comprising men who, with the exception of Adolf Berle and

¹⁶⁴ Kennedy, 'Speech by Senator John F. Kennedy, Hillsborough County Courthouse, Tampa, FL', 18 October 1960. TAPP.

¹⁶⁵ Ibid.

Lincoln Gordon, had little professional or academic engagement with the region whose fortunes they were shaping.

Although ostensibly the Alliance's backstage, the Task Force is best viewed as one of its many fronts: a performance of expertise. In 1964, Gordon would describe the Task Force as a 'transmission belt for thinking that had been developed mainly by Latin Americans'.¹⁶⁶ In reality, Gordon was the transmission belt for thinking that had been developed mainly by modernisation theorists. The Alliance was first solidified into policy at a conference at the Harvard Club in December 1960. There, CENIS was strongly represented and the scientific narrative of modernisation theory dominated. The section of the Task Force's final report dedicated to the Alliance imported the Conference's proposals almost verbatim, while the Task Force's membership suggested no apparent connection to CENIS. Rostow, who participated in that conference, independently endorsed its contents to Kennedy as he urged the president to embark on a Decade of Development. The Task Force's report had two main effects: it was transposed into Kennedy's speeches announcing the Alliance to Congress and to Latin American statesmen, and it informed American preparations for the multilateral conference at Punta del Este to officially inaugurate the Alliance.

Performance: backstage

After the election, the AAC was organised into pre-inaugural task forces to propose policy positions for the incoming administration, a procedural innovation which 'broke the monopoly of the executive branch agencies on programme ideas'.¹⁶⁷ It introduced the well-established format of expert advisory panels directly into executive decision-making. The

¹⁶⁶ Gordon, 'Recorded interview by Reilly, J.E.', 30 May 1964. Kennedy Presidential Library.

¹⁶⁷ Wood (1993), p. 59.

Task Force on Latin America was given highest priority, although it met only three times, in casual settings.¹⁶⁸ First convening in early December 1960, it included Richard Goodwin, the historian Arthur Whitaker, the economists Lincoln Gordon and Robert Alexander, and two officials from Puerto Rico, Arturo Carrion and Teodoro Moscoso. It was led by the Roosevelt brain trustee, Adolf Berle, who was chosen because he symbolised continuity with the Good Neighbour Policy.¹⁶⁹ The Task Force's composition suggested that its recommendations flowed from the deep academic engagement of its members with Latin American economics, politics, history, and society, as well as Moscoso and Carrion's practical experience in the region. In fact, Berle, Moscoso and Carrion were not present at the Foreign Policy Clearing House conference where the Alliance was first fleshed out.¹⁷⁰

Backstage, Task Force members recognised that their proposals were built on policies instigated by the Eisenhower administration: their 'dramatic revitalisation' of US-Latin American relations honoured Eisenhower's pledge of a Social Progress Trust Fund for the region earlier that year, which made \$500 million in loans available through the IADB for 'education, housing, and land reform programmes'.¹⁷¹ 'I already had this down as item number 1 for recommendation in the economic field', Gordon wrote Berle on 12 December.¹⁷² Nevertheless, they laboured backstage to portray the Alliance for Progress as a

¹⁶⁸ 'Notes on the Task Force: Organisation and Operation', n.d. Kennedy Presidential Library; Schwartz (1978), p. 326; Smith (2015), pp. 220-222.

¹⁶⁹ Schwartz (1987), p. 328.

¹⁷⁰ Berle's diary on 19 December 1960 says he was at lunch with Sanchez Arango, former Minister of Education in Cuba. He makes no mention of the Foreign Policy Clearing House conference. Berle (1973), p. 723.

¹⁷¹ Allcock (2014), p. 104. See also Sewell (2015), pp. 128-133.

¹⁷² Gordon, 'Letter to Adolf A. Berle', 12 December 1960. Kennedy Presidential Library.

‘fresh start’: a radical break with the past that would seize a once-in-a-century opportunity in hemispheric relations.¹⁷³

Modernisation theorists would furnish the Task Force with the rhetoric to define this opportunity, define ways to exploit it, and dramatise the consequences of inaction. CENIS academics, including Rostow, Millikan, Rosenstein-Rodan and Everett Hagan, participated unofficially in the Task Force’s discussions and submitted papers for consideration.¹⁷⁴ The Task Force also drew heavily on a conference, ‘The Latin America Policy Project’. This was held on 19 December at the Harvard Club, under the auspices of the Foreign Policy Clearing House (FPOCH), a think tank that generated foreign policy solutions for Members of Congress.¹⁷⁵

Gordon and key CENIS faculty were present, plus other senior businessmen and prominent academics such as Hans Morgenthau and Albert Hirschmann.¹⁷⁶ Discussion at the conference was guided by a background paper prepared by the modernisation theorists.¹⁷⁷ It argued that the predicament faced by Latin American countries, as outlined in Kennedy’s campaign speeches, ‘exists in greater or less degree in our relations to virtually all undeveloped countries’. Unlike other regions, Latin America was on the verge of ‘takeoff’, so a programme like the Alliance would yield rapid returns: ‘the time within which their economic growth may

¹⁷³ Ibid.

¹⁷⁴ Hagen, ‘Memorandum to W.S. Barnes, L. Gordon, M.F. Millikan, P.N. Rosenstein-Rodan, W.W. Rostow’, 7 December 1960. Kennedy Presidential Library.

¹⁷⁵ Foreign Policy Clearing House, ‘What is the Foreign Policy Clearing House?’, n.d. Kennedy Presidential Library.

¹⁷⁶ Foreign Policy Clearing House, ‘Alliance for Progress: A New Approach to Inter-American Relations’, 19 December 1960. Kennedy Presidential Library.

¹⁷⁷ On 5 December, Lincoln Gordon met with W.S. Barnes, Everett Hagen, Max Millikan and Paul Rosenstein-Rodan. They met again on December 13, including Rostow as well. The purpose of these meetings was to prepare for the conference at the Harvard Club. See Hagen, ‘Memorandum to W.S. Barnes, L. Gordon, M.F. Millikan, P.N. Rosenstein-Rodan, W.W. Rostow’, 7 December 1960. Kennedy Presidential Library.

be expected to become self-sustaining is far less than the corresponding time elsewhere...the period required could be less than a decade'.¹⁷⁸

This paper, and a signed statement entitled 'Alliance for Progress: A New Approach to Inter-American Relations', was the first elaboration of the Alliance within the scientific narrative of modernisation theory. Several defining features of the Alliance were determined at this conference; these would later surface in the Alliance's official founding document, the Charter of Punta del Este. The first was an acknowledgement that private capital was insufficient to meet the developmental needs of Latin American states, and the US had to commit public funds: Americans had to 'rid ourselves of the notion that we can underwrite Latin America's social and economic revolution solely through "bankable" projects administered by banking institutions'. Second, US funds should not be spent piecemeal by recipient countries, but instead be absorbed by national development programmes addressing a broad spectrum of social and economic issues, including education, public health, land and tax reform. Finally, the attendees stressed that 'programmes and planning must be an adventure in partnership' rather than in hegemonic imposition. They proposed an 'ad hoc multilateral programming body...to assist national governments in formulating development programmes and to develop criteria for judging the adequacy of domestic efforts', to be headed by a 'small group of Latin American "Wise Men" who would report to the Inter- American Economic and Social Council (IA-ECOSOC). Moreover, the United States should 'lean over backwards to avoid any appearance of dominating it'. From the outset, the Alliance was to be implemented through multilateral channels.¹⁷⁹

¹⁷⁸ 'United States Policy Toward Latin America: An Agenda for Discussion', 19 December 1960. Kennedy Presidential Library.

¹⁷⁹ Ibid.; 'Alliance for Progress: A New Approach to Inter-American Relations', 19 December 1960. Kennedy Presidential Library.

Performance: front stage

The Task Force's final report on 4 January, 1961 set the tone for the new administration's approach to Latin American economic development. Although it was an internal policy paper whose immediate target audience was the incoming president, Kennedy had already accepted the entirety of the narrative. As Berle put it, he wanted 'a set of suggestions on the things that will come up right away; not a study in depth but what to do next'.¹⁸⁰ This section analyses the report as a front stage: how it adapted the scientific narrative of modernisation theory to Latin America and represented itself as 'dramatic revitalisation of Latin American relations'.¹⁸¹ I then explain how that narrative shaped Kennedy's early speeches about the Alliance before two key audiences: Congress, which would decide aid appropriations, and his regional economic 'partners in progress'.

Although the report covered a wide range of issues, its contents were framed by the scientific narrative of modernisation theory. It started by describing the undesirable future to be avoided: the 'greatest single task' for US diplomacy was to 'divorce the *inevitable* and *necessary* Latin American social transformation from connection with and prevent its capture by overseas Communist Power politics'. To manage this risk to American national security, the overarching aim of regional policy should be to direct this transformation 'into channels that are, or ought to be, acceptable to it as well as beneficial to the people involved'. The report's longest section, on economic and social policy, was authored by Gordon. His proposals for implementing the Alliance for Progress repeated almost verbatim the recommendations of the Harvard Club conference, including the use of 'Wise Men' to evaluate national development programmes. Other recommendations simply maintained existing policies:

¹⁸⁰ Berle (1973), p. 719.

¹⁸¹ Gordon, 'Letter to Adolf A. Berle', 12 December 1960. Kennedy Presidential Library.

endorsing the Act of Bogota, appropriating funds for the Social Progress Trust Fund, and implementing the International Coffee Agreement.¹⁸²

Political effects

Below I show how, with the help of Rostow, Gordon, and Richard Goodwin, the scientific narrative expressed in the Task Force's report was incorporated into presidential rhetoric to mobilise the support of two key stakeholders: Congress and Latin American leaders. Section 7 looks at how this narrative was transposed into the founding document of the Alliance, the Charter of Punta del Este, and considers why policy outcomes fell short of the Charter's ambitions.

Administration officials working on Kennedy's speech to Congress about foreign aid anticipated that the unprecedented amounts of public money required to bankroll the Alliance would cause a furore.¹⁸³ 'We will have to dramatise this for the President', Rostow said to Undersecretary of State for Economic Affairs George Ball, to get him 'off the hook for asking for lots of money'.¹⁸⁴ This deflective strategy included several elements. First, the Alliance was positioned as heralding a 'Decade of Development': Rostow advised the Task Force to eliminate hard data, instead playing up 'the opportunity of taking a great number of countries in Latin America over the hump...by the end of this decade 80% of Latin America should be where Mexico is now...It is clear this is a process which can only be effective if we are prepared to commit ourselves...to the principle of long-term aid'.¹⁸⁵ Meanwhile, a 'hedge

¹⁸² Task Force on Immediate Latin American Problems, 'Report to President-elect Kennedy', 4 January 1961. Kennedy Presidential Library.

¹⁸³ Goodwin, 'Teleconference with George Ball (Transcript)', 23 February 1961. Kennedy Presidential Library.

¹⁸⁴ Rostow, 'Teleconference with George Ball (Transcript)', 3 January 1961. Kennedy Presidential Library.

¹⁸⁵ Ibid. Rostow also petitioned Kennedy directly to adopt the 'Decade of Development', claiming that the developing world would collectively 'takeoff' during the sixties, and thus 'we face the peak historical requirement for special external aid'. Thereafter, he expected Latin America to '[draw] from special

against Congressional trimming' was built in by requesting funding in excess of the 'actual absorptive capacity' of developing nations.¹⁸⁶ Second, the multilateral nature of the programme was to be emphasised '[to reverse] the burden of responsibility...so Latin Americans decide first on lines of action'.¹⁸⁷ Internal reforms and other 'self-help' measures were enjoined to maximise the impact of external assistance.¹⁸⁸ Third, the Alliance was to be compared publicly to the Marshall Plan and the rapid progress made in Western Europe, even though such comparisons were privately regarded as misleading. As Lincoln Gordon wrote to Richard Goodwin, 'The problems of overcoming an ancient heritage of poverty, widespread illiteracy, and grave social, economic and geographical imbalances in the development process are fundamentally different from those of engendering economic recovery in industrially advanced nations'.¹⁸⁹

These backstage manoeuvres to present a positive image of the Alliance to Congress led Kennedy to promise 'fruitful results' reminiscent of the Marshall Plan, and to situate the Alliance in a 'crucial Decade of Development — the period when many less-developed nations make the transition into self-sustained growth', wherein 'free industrialised nations' were united in a common effort to bring low-income countries 'to a stage...where extraordinary outside assistance is not required'. Kennedy also emphasised the pivotal role of national development programmes, and measures of 'internal reform and self-help', 'tailored to the recipients' current stage of development'.¹⁹⁰ Above all, this version of the Alliance

international sources either no capital or much diminished volumes of capital'. Rostow, 'The Idea of an Economic Development Decade', n.d. Kennedy Presidential Library.

¹⁸⁶ Rostow, 'The Strategy of Foreign Aid, 1961', n.d. Kennedy Presidential Library.

¹⁸⁷ 'Economic Growth and Social Reform: The Indispensable Requirements', n.d. Kennedy Presidential Library.

¹⁸⁸ Goodwin, 'Teleconference with George Ball', 23 February 1961. Kennedy Presidential Library.

¹⁸⁹ Gordon, 'Draft Memorandum From the Consultant to the Task Force on Latin America (Gordon) to the President's Assistant Special Counsel (Goodwin)', 6 March 1961. *FRUS*.

¹⁹⁰ Kennedy, 'Special Message to the Congress on Foreign Aid', 22 March 1961. TAPP.

emphasised its role in countering Communist efforts ‘to exploit that region’s peaceful revolution of hope’.¹⁹¹ Foreign aid was foremost an instrument to further the national interest.

A different face of the Alliance for Progress was presented to Latin American representatives in mid-March. Arthur Schlesinger suggested to Goodwin that ‘a certain amount of highflown corn’ would be needed to ‘thrill the audience south of the border’, and to convey that ‘we are concerned with economics, not for its own sake, but to promote the higher aims of culture and the spirit’.¹⁹² The assurances to Congress of a purpose and an end to foreign aid was replaced by the rhetoric of partnership. National interest was sublimated into a collective hemispheric identity and Communism escaped mention: ‘I don’t want them to think only reason we’re doing this is because of Cuba’, said Kennedy.¹⁹³ Instead, Kennedy’s speech lifted from the scientific narrative of modernisation theory the trope that imperialism was a key obstacle to economic development, whilst postcolonial nationalism was its trigger. The Alliance was framed as the natural extension of a shared revolutionary heritage into a new frontier. ‘Our nations are a product of a common struggle, the revolt from colonial rule’, Kennedy reminded his audience, ‘[l]et us once again transform the American continent into a vast crucible of revolutionary ideas and efforts...an example to all the world that liberty and progress walk hand in hand’.¹⁹⁴

¹⁹¹ Kennedy, ‘Annual Message to the Congress on the State of the Union’, 30 January 1961. TAPP.

¹⁹² Schlesinger, ‘Memorandum From the President’s Special Assistant (Schlesinger) to the President’s Assistant Special Counsel (Goodwin)’, 8 March 1961. *FRUS*.

¹⁹³ Quoted in Goodwin (1988), p. 148.

¹⁹⁴ Kennedy, ‘Address at a White House Reception for Members of Congress and for the Diplomatic Corps of the Latin American Republics’, 13 March 1961. TAPP.

7. The Alliance for Progress (1961)

The Alliance for Progress was conceived of as an instrument to manage the risk to American national security posed by underdevelopment in Latin America. It was legitimised by a scientific narrative that categorised the world's economies into discrete stages of development, and inferred from these stages the appropriate form of external assistance that industrialised nations like the US should provide. Those nations would 'partner' with less developed ones until they achieved self-sustaining economic growth, at which point it was assumed the need for external assistance would subside.

Then and now, the Alliance is generally regarded as an astoundingly expensive failure. The reasons for its eventual demise are complex. Several analyses point to an inconsistency between the fraternal spirit of the Alliance and the Kennedy administration's serial interference in the domestic affairs of Latin American states.¹⁹⁵ Others highlight the roles of an ineffective administrative structure, congressional opposition, and a balance of payments crisis that 'hardened' loans during the Johnson administration.¹⁹⁶ In addition to these factors, I argue that the very framing of the Alliance as a partnership, which derived from the scientific narrative of modernisation theory, played a part in its demise by requiring the US to execute a unilaterally-backed programme through multilateral fora. This raised significant organisational and implementational barriers to the Alliance's success.

Unusually for a programme formulated and funded by Americans to serve American ends, the Kennedy administration inaugurated the Alliance in August 1961 by calling a meeting of Latin American leaders at Punta del Este in Uruguay. After the Bay of Pigs fiasco, whose fallout coincided with preparations for the conference, US policymakers thought it was

¹⁹⁵ Livingston (1994); Rabe (1999).

¹⁹⁶ Sáez (1968); Taffet (2007); Sewell (2015).

especially important to create the impression that they were engaging Latin Americans in genuine intellectual partnership.¹⁹⁷ At this late juncture, Lincoln Gordon and Richard Goodwin solicited the input of ECLA and IA-ECOSOC on position papers to guide the conference, although its agenda had already been set in Washington.¹⁹⁸

At Punta del Este, the US asked Latin American representatives to collectively craft the Charter of the Alliance ‘within the framework of Operation Pan-America’. Appending ‘Operation Pan-America’ to the Charter’s title suggested that the Alliance was a culmination of a noble, rich history of economic cooperation between nations that shared a ‘revolutionary heritage’, as the document’s preamble stated.¹⁹⁹ The Charter, although lacking the legal status of a treaty or covenant, enshrined Rostow and Millikan’s thesis that economic growth was the primary means of measuring and attaining development. It defined progress narrowly, as the achievement of ‘self-sustaining development’ through ‘substantial and sustained growth of per capita income’, which ‘should not be less than 2.5 percent per capita per year’.²⁰⁰ It committed the US to disbursing \$1 billion in aid before March 1962. At the conference, Treasury Secretary Clarence Dillon promised \$20 billion over the decade. In return, Latin Americans pledged social and economic reform.²⁰¹

The Charter also established the machinery for distributing aid, modelled on the proposals of the Harvard Club conference. Participating countries were to propose comprehensive ‘national development programmes’ that raised living standards, increased agricultural and

¹⁹⁷ Taffet (2007), p. 31.

¹⁹⁸ Goodwin, ‘Memorandum From the President’s Assistant Special Counsel (Goodwin) to President Kennedy’, 12 June 1961. *FRUS*.

¹⁹⁹ Organisation of American States, ‘The Charter of Punta del Este: Establishing an Alliance for Progress Within the Framework of Operation Pan-America’, 17 August 1961. The Avalon Project.

²⁰⁰ *Ibid.*

²⁰¹ Rabe (1999), pp. 30-41.

industrial productivity, promoted free trade and reformed tax structures. A panel of nine experts within IA-ECOSOC, the ‘Wise Men’, would review these proposals, then forward their non-binding recommendations to the Inter-American Development Bank and other potential donors — in other words, the United States.²⁰²

This byzantine structure was at once convoluted and ill-defined. It incentivised neither initiative nor fidelity. No organisation was created to implement the promises of the Charter, or coordinate between donors and recipients. Many countries lacked the data and technical personnel to create sound national development plans, progress on which was often hampered by political in-fighting. By April 1963, only five countries had submitted plans to the so-called ‘wise men’, who rarely agreed with each other, and lacked the clout to persuade state leaders to accept their recommendations.²⁰³ Many more countries bypassed this process and directly petitioned the State Department, which was willing to negotiate loans bilaterally.²⁰⁴ As Columbian President Alberto Carmago put it, this ‘caused an unending series of misunderstandings, resentments, conflicts and...opportunities for scoring in the political game’.²⁰⁵

Bureaucratic and congressional politics also created problems on the US side. Teodoro Moscoso was appointed as coordinator for the Alliance, but was a weak figure, ill-regarded by Latin American leaders.²⁰⁶ His office was housed within the Agency for International Development (USAID), itself part of the State Department. Representative Otto Passman,

²⁰² Organisation of American States, ‘The Charter of Punta del Este: Establishing an Alliance for Progress Within the Framework of Operation Pan-America’, 17 August 1961. The Avalon Project.

²⁰³ Martin (1994), pp. 86-87.

²⁰⁴ Taffet (2007), p. 39.

²⁰⁵ Carmago (1963), p. 35.

²⁰⁶ Taffet (2007), pp. 37-39.

the fiscal conservative instrumental in defeating the first Kennedy-Cooper Resolution, was a spectre that haunted the Alliance from its inception. Hugely influential as the chairman of the Foreign Operations Subcommittee of the House Appropriations Committee, he was able to force both the House and the Senate to slash aid bills.²⁰⁷

In practice, the logic of risk management embodied by the Alliance was repeatedly subordinated to the logic of threat mitigation as US officials co-opted the programme to stamp out Communism in the Western Hemisphere. There is little evidence to suggest that the architects of the Alliance intended for this to happen. Rather, the absence of formal, binding mechanisms for disbursing aid according to the Charter's principles meant there were few safeguards against funds being used to achieve the US's short-term political objectives. In Chile, for example, the Alliance became 'the main conduit for supporting politicians opposed to the Marxist parties and their leader, Salvador Allende'.²⁰⁸ Following a bloody civil war in 1965, the Dominican Republic became a major recipient of Alliance funds. President Johnson ordered US troops to intervene in order to prevent supporters of the deposed socialist president, Juan Bosch, from taking power, then used Alliance funds to shore up the regime of his quasi-authoritarian successor, Joaquín Balaguer.²⁰⁹ In Bolivia, money appropriated for the Alliance was used to support the military in its brutal suppression of pro-Communist labour and mining unions.²¹⁰

²⁰⁷ Johnson (1999); Taffet (2007), pp. 39-40.

²⁰⁸ Taffet (2007), p. 7.

²⁰⁹ Ibid.

²¹⁰ See Field (2012).

8. Alternative theories

Epistemic community theory and persuasion

Despite meeting the criteria of an epistemic community, the modernisation theorists studied in this chapter behaved in ways contrary to that framework as they conspired to present the most compelling version of their narrative to successive audiences of policymakers. On the surface, the Princeton Inn conference appeared to be a consensus-building exercise; behind the scenes, its organisers ensured that their preconceived narrative would form the basis of the World Economic Plan. The other attendees provided endorsement, but little else. Rostow's exchange with Kennedy before the Senate Foreign Relations Committee seemed to be a spontaneous exercise in communicative action, but was actually the product of extensive preparation by Kennedy, Rostow and Frederick Holborn. The Task Force on Immediate Latin American Problems implied, in name and in composition, a thorough dissection of Latin American issues by regional specialists. In reality, the Task Force's proposals for the Alliance for Progress were imported wholesale from another working group dominated by CENIS faculty. By implying that we should take expertise at face value, epistemic community theory cannot account for these discrepancies in regional behaviour. A dramaturgical approach, by contrast, sees the difference between what is presented to an audience and what happens backstage as part of the overall process of creating a dramatic effect of expertise.

Epistemic community theory also asserts that possessing recognised competence and expertise in an issue area is sufficient to grant experts access to decision-makers. The events analysed in this chapter suggest otherwise. Being recognised as competent matters, but so do social ties, and opportunities to perform are typically created by leveraging both. The close links between CENIS and the US government exposed its researchers to influential figures such as C.D. Jackson — probably more so than peers at other institutions who were equally well qualified. Social and cultural capital could be accumulated from successful performances of expertise,

opening up further performance opportunities. For example, Rostow and Millikan's publication of *Proposal: Key to an Effective Foreign Policy* led to invitations to testify before the SFRC, and to contribute to the IDAB's review of foreign policy. At the same time, these engagements jeopardised CENIS's reputation as an independent organisation providing impartial, non-partisan analysis. This required its director, Millikan, to engage in constant boundary maintenance.

Securitisation theory and threatening

Bentley Allan's adaptation of securitisation theory focuses on experts' rhetoric. Whereas epistemic community theory does not allow for the possibility that experts will strategically use language to achieve their desired policy objectives, Allan's theory disregards factors besides the strategic use of language. Modernisation theorists like Rostow and Millikan were adept rhetoricians, but if what they said was all that mattered, we could not explain the great lengths they went to manage other aspects of their interactions with policymakers.

Events like the Princeton Inn conference do not make sense from a purely rhetorical perspective: it was costly to convene, especially since the attendees added little of substance to its output, the World Economic Plan. The aim of the conference was to create a dramatic effect of consensus to reinforce the scientific narrative of the Plan. It attempted to mobilise support for the Plan within government by creating the impression that such support already existed outside government. The modernisation theorists pursued a similar strategy during the foreign aid debates of 1957. They repackaged the narrative in *Proposal* as a study specially prepared for the SFRC. Backstage, CENIS was also heavily involved in the IDAB's review of foreign aid programmes. Millikan and the IDAB's chairman, Eric Johnston, would then testify before the SFRC. This gave the impression of multiple independent voices converging on the same set of policy proposals, when in fact the same individuals were behind both. The

situations in which experts conveyed their opinions, and the format and sequence in which they did so, also shaped the outcomes of these performances.

To explain experts' rhetoric and its political consequences, Allan adapts securitisation theory. Securitisation is 'a type of speech act that creates (if successful) a certain kind of social situation moving issues into a special category of emergency politics...that sets aside the "normal" rules governing decision-making in a given society'.²¹¹ The modernisation theorists were making claims that related to national security, but they did not ask for, nor did they receive, special dispensation from conventional political processes. Many of the initiatives they proposed or supported — the World Economic Plan, the Development Loan Fund, the Kennedy-Cooper Resolution, and the Alliance for Progress — did involve significant changes to how the US approached foreign aid. However, these were not calls for exceptions to be made, but for a new normal to be instituted: a long-term commitment to manage the national security risks posed by 'underdevelopment'. As a complex, interlocking set of social and economic conditions, underdevelopment could not be neutralised or eliminated, as one would an enemy, only managed on an ongoing basis. Securitisation theory, by contrast, assumes that the source of danger is not governable, but rather something to be defended against or destroyed.²¹²

9. Conclusion

There was no pre-given reason why the Alliance assumed the form that it did. The US had a long-standing tradition of regarding Latin Americans as politically, economically, and culturally inferior, matched by an equally long-standing tendency to intervene unilaterally in

²¹¹ Corry (2012), p. 239.

²¹² Ibid. p. 248.

its ‘backyard’.²¹³ At best, the US was a ‘Good Neighbour’, albeit one with a nicer house. It was indisputably the region’s preponderant power, a fact unchanged by a Communist Cuba. Even if Cuba made US officials more receptive to Latin American requests for aid, there was neither strategic imperative nor historical precedent to engage them as international partners in an ‘Alliance for Progress’, especially since the necessity for the Alliance highlighted the disparities between them.

Lacking an engine, wings, and with few passengers onboard, the Alliance never took off. Of the \$1 billion the US pledged in 1961, only \$75 million was spent on development loans: the remainder was used to fund ‘commodity imports, provide balance-of-payments credit, and deliver agricultural surpluses, activities that did nothing to further long-run goals for the region’.²¹⁴ During the 1960s, Latin American countries received 18 percent of US foreign assistance, yet their average GDP growth rate stagnated at 1 percent per year.²¹⁵ By the decade’s end, interest in the Alliance on both sides of the Rio Grande had waned, and the Organisation of American States disbanded the committee responsible for implementing it in 1973. The scientific narrative of modernisation theory successfully redirected the flow of US aid south, but failed to modernise Latin America.

In 1969, President Nixon dispatched Norman Rockefeller to Latin America to understand where the programme had gone awry. Rockefeller’s report indirectly attributed the Alliance’s failure to the hubris of modernisation theory and its proponents. For the past decade, Americans had operated under the assumption that they could use economic assistance to usher Latin American countries along a single pathway to democratic modernisation.

²¹³ Murphy (2005); Schoultz (2009).

²¹⁴ Latham (2000), p. 100.

²¹⁵ Rabe (1999), p. 155.

Framing this enterprise as a ‘partnership’ could not disguise its underlying paternalism. ‘We must recognise’, Rockefeller concluded, ‘that the specific forms or processes by which each nation moves towards a pluralistic system will vary with its own traditions and situation. We know that we, in the United States, cannot determine the internal political structure of any other nation, except by example’.²¹⁶

Rockefeller’s commentary captures why modernisation theory gets such short shrift as a social scientific theory today. The late 1960s saw the beginnings of a backlash against modernisation as an intellectual paradigm. Critics attacked its ethnocentrism and determinism.²¹⁷ These charges, though valid, should not diminish our appreciation of modernisation theory’s importance as a scientific narrative which shaped US foreign policy in lasting ways. Crucially, the connection it forged between national security and development overseas continues to legitimise America’s foreign aid regime as a form of risk management, even as the meaning of development has evolved beyond raising GDP per capita. The portion of the 2021 National Security Strategic Guidance, which justified the US’s ‘renewed commitment’ to development, could just as easily have been written in 1961: ‘When we invest in the economic development of countries, we...reduce the likelihood of instability, violence, and mass migrations...America’s interests at home are strengthened by improving lives globally’.²¹⁸ The clear separation between military and development assistance persists, as does as the role of the US as a ‘partner’ to developing countries.²¹⁹

²¹⁶ Rockefeller (1969), p. 95.

²¹⁷ See Latham (2010), Chapter 6.

²¹⁸ Biden, ‘Renewing America’s Advantages: Interim National Security Strategic Guidance’, 3 March 2021. The White House.

²¹⁹ Morgenstern and Brown (2022).

Metrics like GNP and GDP scaled the national economy into an object of global governance. By telling a universal story of how this object would transform over time, and linking it to a country's political evolution, the scientific narrative of modernisation theory contributed to the reification of 'the economy' as a collection of forces whose boundaries were contiguous with that of the nation-state, and which were amenable to the same kinds of external intervention. Changes to how development assistance is practiced by the US government largely continues to operate within this orthodoxy. USAID, which implements most of American development assistance, has shifted from 'government-to-government' assistance to delivering most projects through NGOs and private contractors.²²⁰ However, this is still to execute country-level strategy, with 'success' measured by a standardised set of national performance metrics.²²¹ The US now embraces a vision of development that encompasses health, education, female emancipation, and 'good' governance. Yet, its Foreign Assistance Framework continues to use 'objective indicators' of 'political, economic, and social characteristics' to organise recipient countries into five stages along a 'trajectory of progress', with countries able to 'graduate' into the next category once certain thresholds are met.²²²

I conclude by highlighting three striking aspects of this case. First, Rostow and Millikan developed their version of modernisation theory by studying the rise of Western industrial economies. Yet their scientific narrative was first applied in Latin America, a region about which they knew little and cared less. This narrative had a far greater impact on US economic policy towards Latin America in the early 1960s than specialists in its history, languages, politics, or people. This was only possible because it posited a unilinear, universally applicable

²²⁰ See Morgenstern (2022); Morgenstern and Brown (2022).

²²¹ See US State Department (2016, 2021).

²²² US State Department (2007).

process of socioeconomic transformation. All countries could be understood, and therefore acted upon, according to their stage of growth. It is a prime example of what Arland Thornton calls ‘reading history sideways’: ‘the practice of interpreting cross-sectional variation as chronological progress through a universal human history’.²²³ This storytelling technique resurfaces in the next chapter on population assistance.

Second, Rostow, Millikan, and others had been advocating for a new approach to foreign aid for economic development since at least 1954, with relatively little success. While Kennedy’s enthusiasm for revamping the US foreign aid programme predated his presidential campaign, he paid little attention to Latin American economic development until Cuba ‘fell’ to Communism in 1960. The scientific narrative of modernisation theory enabled him to blame Castro’s ascent on the Eisenhower administration’s rejection of Cuban demands for economic development. He then argued that similar neglect of the entire region would have dangerous repercussions for US national security, unless there was a new programme of foreign aid for economic development. On this basis, Kennedy called for an Alliance for Progress. This illustrates how the adoption of particular policies reflecting a given scientific narrative can be a function of more narrow political objectives, like winning elections.

Finally, this case study also demonstrates how scientific narratives can constrain state action. Circumstance and choice both contributed to the Alliance’s failure. The historical evidence presented in this chapter shows that the scientific narrative of modernisation theory gave the Alliance its distinctive character as a nominally equal ‘partnership’ between US and Latin American countries. To make this credible, US policymakers committed to an institutional design that was costly and inefficient, and made success on its own terms needlessly difficult.

²²³ Thornton (2004) as summarised in Merchant (2021) p. 86.

This method of implementing a foreign aid programme was unprecedented. The Alliance's closest comparator, the Marshall Plan, was very different: Western European countries jointly delivered a single request for aid directly to the US government, without first passing through an ineffectual panel of 'wise men'. More importantly, the Marshall Plan's purpose was rehabilitation, not revolution: it aimed to increase production and promote free trade and fiscal stability, not remake societies in America's image.²²⁴ In this respect, it was a more genuine partnership than the Alliance, which could never escape the inherent contradiction of engaging weaker states as equals in a programme animated by modernisation theory's singular, teleological, and intolerant narrative of progress.

²²⁴ See Ekbladh (2003).

5. Population scientists and population assistance to the developing world

The previous chapter introduced the poverty/development problematic: the technoscientific discourses that established ‘poverty’ as the defining condition of the so-called Third World, and offered ‘development’ as its solution. I explained how national economies in developing areas became objects of global governance, how American leaders came to regard them as posing a risk to national security, and how they attempted to manage that risk through initiatives like the Alliance for Progress. The story told in this chapter runs in parallel to the previous one. From the beginning of the postwar era, poverty was not only seen as an economic problem, but also as a demographic one. In fact, the term ‘Third World’ was coined by a French demographer, Alfred Sauvy. He offered a tripartite interpretation of the Cold War order: a First World, consisting of the United States and its Western allies, a Second World of Communist bloc countries, and a Third World, which had ‘our mortality of 1914 and our natality of the 18th century’.¹

Sauvy was referencing the growing disparity between birth and death rates in Latin American, Asian, and African countries, which led to the doubling of the world’s population from two to four billion between 1927 and 1974.² Whereas population had been viewed as a source of national strength, now it was thought that having too many people made nations vulnerable and unstable. Critically, it risked erasing the gains brought by investment in capital and infrastructure: a predicament captured by GDP per capita. American policymakers,

¹ Quoted in Connelly (2008), p. 153.

² Statistics from UN Fund for Population Activities (2011), pp. 2-3.

whose concerns about population had previously stopped at the water's edge, grew increasingly perturbed by rapid population growth in other countries. This chapter traces the scientific narrative of the population explosion that substantiated and amplified their alarm while identifying ways to alleviate it. It tracks the performances of expertise that identified the population explosion as a major risk to national security, and the circuitous, uneven process by which the US government came to intervene in the most intimate of human decisions: to reproduce.

The measures that Western governments, private foundations, and NGOs took to arrest population growth in the developing world by lowering fertility rates are collectively termed *population assistance*. Foremost, it meant providing national governments with the funding, technology, training and expertise to formulate and deliver population control programmes. It also entailed generating demographic knowledge through surveys of fertility behaviour and population growth projections; researching connections between demographic, socioeconomic and political variables; and developing various forms of birth control technology like the contraceptive pill, spermicidal foam, and inter-uterine devices (IUDs).³

The main impetus behind population assistance was a network of academics, philanthropists, politicians, and campaigners whom historians call 'the population establishment'.⁴ Although this network was transnational, many of its personnel and resources were American, concentrated in private foundations like the Milbank Memorial Fund, the Ford and Rockefeller Foundations, the Hugh Moore Fund, the Pathfinder Fund, and the Population Council, which was founded with money from the Rockefeller Brothers Fund. They had close ties to academia: aside from their own research divisions, they financed fellowships and

³ See Organisation for Economic Cooperation and Development (1970); Salas (1979).

⁴ Connelly (2008); Merchant (2021).

projects at organisations like Princeton University's Office of Population Research, and professional associations such as the Population Association of America.⁵

The population establishment's deep pockets allowed them to launch their own population assistance programmes in developing countries, as well as campaign in international forums.⁶ Also high on their agenda was to convince the US government to recognise the population explosion as an urgent global problem, and take responsibility for fixing it. Two factors helped them gain access to decision-makers. First, the government already regarded demography as critical for postwar planning and invested heavily in the discipline.⁷ Second, the population establishment included the scions of America's industrial dynasties, such as Clarence Gamble and John D. Rockefeller III, plus self-made millionaires like Hugh Moore. Its ranks would later swell with retired government officials, including General William Draper, the US representative to NATO, and General Maxwell Taylor, who chaired the Joint Chiefs of Staff under President Kennedy. All these men had social ties stretching deep into the political establishment, which they capitalised on to create performance opportunities.

As a result of the population establishment's efforts, the US government became a major player in the governance of global population. It first offered population assistance to developing countries in the mid-1960s. Between then and 1980, America contributed to over half of population assistance funding worldwide: it was the largest donor to the UN Fund for Population Activities (UNFPA) and the International Planned Parenthood Foundation (IPPF), and 'provided almost the entire budget for smaller NGOs such as the Pathfinder

⁵ For a concise summary of these institutional arrangements, see Merchant (2017), pp. 85-98. For insider recollections, see Notestein and Osborn (1971); Notestein (1978).

⁶ See Harkavy et al. (1968); Mamdani (1972); Warwick (1982); Eager (2010); Connelly (2008).

⁷ Szreter (1993), pp. 675-678; Notestein (1982), p.664.

Fund’.⁸ US officials from the president downward urged their counterparts in developing countries to adopt far-reaching, sometimes coercive measures to lower fertility, often conditioning aid on proof of progress on population control. Meanwhile, USAID inundated developing countries with contraceptives, and financed programmes to train foreign medics in methods of sterilisation and abortion.

This commitment is noteworthy because the scientific narrative that legitimised it lacked a sound empirical basis. Calculating a country’s population size and growth proved challenging in countries which lacked the infrastructure to carry out regular, comprehensive censuses. To compensate, demographers devised fantastical methods of estimating these attributes from tiny samples. They also developed demographic transition theory: a universal story about how national populations stabilised over time as their economies matured. As societies underwent industrialisation, their death rates would decline before their birth rates. A period of high population growth would eventually taper off as fertility declined with rising living standards. When demographers turned their attention to non-Western societies, they concluded that colonialism had warped this demographic transition: the introduction of basic improvements to public health and sanitation had caused mortality rates to plummet in societies that were still largely agrarian, while birth rates remained high. They now construed high fertility as an autonomous variable, and recast population growth as an impediment to economic development.⁹

From this bricolage of projections emerged the scientific narrative that the developing world was at the epicentre of a ‘population explosion’. Left unchecked, it would lead to endemic hunger and poverty, creating upheaval in the countries that supplied the free world economy

⁸ Connelly (2008), p. 289; Donaldson (1990), pp. 46-52.

⁹ Hodgson (1983), pp. 8-9.

with crucial raw materials. The Soviet Union would opportunistically exploit these conditions to expand its influence. The risk of the population explosion to American national security could be managed if the government intervened indirectly to lower fertility in developing countries by helping their leaders design, finance, and implement national population control programmes.

By the late 1950s, it was widely accepted that a population explosion was underway in the developing world and that this was detrimental to US national security. However, transposing the narrative's proposed interventions into political practice was far from straightforward. Powerful factions within American society opposed population control on moral grounds. To the Catholic Church, and later the anti-abortion movement, federal government interference in reproductive choices was unconscionable.¹⁰ Elected officials were sensitive to the fact that supporting population control could be punished at the ballot box, so at times they qualified that support, or withdrew it entirely.

The first performance of expertise examined in this chapter faltered for this reason. In 1958, when Eisenhower ordered William Draper to lead a committee to review the Mutual Security Program, Hugh Moore spied an opportunity to bring the population explosion to the attention of government insiders. He used his acquaintance with Draper to manoeuvre an associate, Robert Cook, into becoming the committee's only population consultant. By controlling the flow of information to committee members, he was able to introduce the scientific narrative of the population explosion into the Draper Committee's final report. Eisenhower privately accepted this narrative, but publicly rejected its implication that the US

¹⁰ The anti-abortion movement is sometimes called the 'pro-life' or 'right-to-life' movement; I will use the latter two terms only when quoting from an external source.

ought to provide population assistance, so no policy change occurred. I argue that this was because he feared alienating Catholic voters in the upcoming presidential elections.

US population policy towards the developing world officially began during the Johnson administration. I show that President Johnson's embrace of population assistance hinged on research by the RAND Corporation economist Stephen Enke. Enke argued that children were a net drain on low-income countries, so preventing them from being born was a cost-efficient way of promoting economic development. NSC staff member Robert Komer brought Enke's work to Johnson's attention because it resonated with the president's concerns about an emerging balance of payments crisis. Komer also presented poll data showing that public opinion — including Catholic opinion — had swung in favour of population assistance. Thereafter, Johnson publicly committed the US government to providing population assistance, and a new diplomatic regime linking population control to foreign aid negotiations was put into practice. However, the actual disbursement of population assistance was hampered by bureaucratic incapacity at USAID.

The third episode considers how a small but influential ensemble of performers were able to monopolise access to government decision-makers during the Nixon administration. Through their involvement in a major National Security Study, members of the PCC advanced the scientific narrative of population control up the national security agenda, even as their fellow population establishment members distanced themselves from this narrative. The study's recommendations were adopted wholesale by the Ford administration, which presided over the most significant escalation of population assistance since the mid-1960s.

Finally, I consider the opposite scenario: how experts and their allies can be excluded from the policymaking process, despite having their scientific narrative deeply entrenched in state institutions and practice. The lead-up to the 1984 presidential elections coincided with

preparations for the UN World Population Conference in Mexico City. There, the US delegation announced that there was no ‘global population crisis’, and that they would withdraw federal funding from any organisation that offered or promoted abortion services. I argue that this sudden change had little to do with the activities of the population establishment. Instead, it was driven by the domestic anti-abortion coalition, who were able to effectively threaten Ronald Reagan’s reelection prospects.

1. The birth of population

The mid-century notion that developing countries were ground zero for a population ‘bomb’ or ‘explosion’ evoked images of a world bursting at its seams: teeming multitudes crowded into slums and scrapping over dwindling resources, with women worn down by endless cycles of pregnancy and childbirth, and their offspring deprived of jobs, housing, and education. But the only way to bear witness to this crisis was statistically — it was a catastrophe made comprehensible through numbers. Just as the economy was created through national income accounting, national populations were ‘statistical artefacts’: the products of censuses and surveys tabulating traits, like age, gender, religion, and occupation.¹¹ These calculative exercises, which first proliferated in post-Napoleonic Europe, could only be carried out by the state. In turn, they helped states to ‘see’, as James Scott puts it, permitting new modes and techniques of governance.¹² They allowed bureaucrats to tax, inoculate, and discipline; in the colonies, they facilitated dispossession, segregation, and surveillance.¹³ Once ‘population’

¹¹ Merchant (2021), p. 15. Ian Hacking argues that enumeration requires categorisation: ‘categories had to be invented into which people could conveniently fall in order to be counted’. Hacking (1990), p. 3.

¹² Scott (1999).

¹³ Scott (1999). A rich literature explores the political implications of census-making and other ways of counting people. For example, Hannah (2000); Watts (2003); Peckham and Pomfret (2013); Kalpagam (2014).

seemed real, rulers and other elites imbued it with their anxieties and aspirations, although these were mainly directed inwards.¹⁴ One manifestation of this tendency in America was eugenics: the movement to purge a population of its undesirable traits. In practice, this meant restricting immigration, policing miscegenation, and forcibly sterilising those who were indigent, disabled, or non-white.¹⁵

The scaling up of population into a global governance object gathered pace during the interwar period.¹⁶ Intellectuals on both sides of the Atlantic highlighted the risks to national and international stability posed by ‘overpopulation’ or ‘surplus populations’.¹⁷ The theme of infinitely multiplying populations depleting the earth’s finite resources dominated the inaugural World Population Conference, held in Geneva in 1927. A country whose resource base could not support its people was considered vulnerable to external aggression or internal collapse.¹⁸ Aside from this, there was little agreement on how population change impacted other variables, such as economic growth, or how governments should manage overpopulation. Concern over ‘overcrowding’ led to a torrent of sensational books and articles. Popular titles published shortly after World War II, such as William Vogt’s *Road to Survival* and Fairfield Osborn’s *Our Plundered Planet*, depicted ‘a finite and increasingly fragile planet...being ransacked by an ever increasing number of human beings’.¹⁹

¹⁴ See Hoff (2012), Chapter 2.

¹⁵ The eugenics movement is thought to have died out after World War II, but the policies and practices it legitimised, notably compulsory sterilisation of marginalised groups, persisted after 1945. See Hansen and King (2013).

¹⁶ This paragraph adapts material from my MPhil thesis. Some of the original wording is retained, although modifications have been made. See Young (2016), pp. 53-54.

¹⁷ Bashford (2007).

¹⁸ Ibid. pp. 183-185.

¹⁹ Desrochers and Hoffbauer (2009), p. 43.

Actual calculations of global population lagged significantly behind these fears. In 1939, the League of Nations turned to Princeton University's Office for Population Research (OPR) to project how Europe's population would change over the remaining century. As Emily Merchant explains, they obtained demographic data for European countries relatively easily. But other nations lacked the well-resourced, far-reaching state apparatuses needed to carry out national censuses: some conducted them only sporadically; others, like China, not at all.²⁰ Censuses had been taken in the colonies, but the quality of the data was poor and inconsistent, and they were 'more like inventories of the overseas human resources available to European empires'.²¹

After the war, the UN created a Population Division. In the 1950s, it encouraged national governments in developing countries to embrace census-taking as a political technology. The Division planned to use the results to tally world population, but encountered a minefield of problems: each country counted people differently, and leaders interfered with census results for parochial reasons.²² To compensate for bad or non-existent data, the Division's demographers used model life tables, model stable populations, and indirect estimation methods.²³ Life tables showed mortality rates for specific age brackets; generic life tables were modelled from historical data for Europe. Model stable populations were mathematical constructs which assumed constant rates of fertility and mortality, plus stable age structures. Indirect estimation methods allowed researchers to pick the 'correct' model stable population

²⁰ Merchant (2021), pp. 67-68.

²¹ Ibid. p. 69.

²² Ibid. p. 77-79.

²³ They also tried to use sample surveys. Sample surveys were a reliable method of extrapolation in countries where enough about its population was already known for a representative sample to be constructed, but was quite useless in developing countries. The combination of model life tables and model stable populations proved to be far more potent. See *ibid.* pp. 80-81.

and model life table by surveying a sample of local women. By combining these three techniques, demographers could fill in any country's vital statistics and extrapolate its population growth rate.²⁴ In this sense, the 'population explosion' was a numerical construct: a pivotal moment in history arrived at via statistical conjecture.

2. The 'population bomb' and the Draper Report (1958-1960)

In November 1958, President Eisenhower asked General William Draper to lead a group of prominent ex-government and military officials in conducting an 'independent, objective, and nonpartisan analysis' of the Mutual Security Program (MSP).²⁵ The Draper Committee was initially asked to review the Program's military aspects, but later extended its inquiries to economic assistance as well. Population issues were only included by Draper after an appeal by Hugh Moore, a well-connected philanthropist who devoted his retirement to raising public awareness about the population explosion through his eponymous foundation, the Hugh Moore Fund for International Peace. Moore then arranged for Robert Cook, the director of the Population Reference Bureau, to act as the Committee's only population consultant. In this capacity, he was able to control the flow of information to Committee members.

The scientific narrative Cook imparted in his performance of expertise was rooted in demographic transition theory (DTT): 'For those wishing to formulate and execute coherent policy with a global scale of application, the theory provided an appropriately scaled general historical model'.²⁶ The original version of DTT held that demographic change followed socioeconomic change: birth rates would naturally decline as societies modernised. In the late

²⁴ Ibid. pp. 88-91.

²⁵ Eisenhower, 'Letter to William H. Draper, Jr., Regarding Study of the United States Military Assistance Program', 24 November 1958. TAPP.

²⁶ Szreter (1993), p. 666.

1940s, this causal relationship was reversed, and population growth was recast as the principal barrier to economic development. This change was not motivated by new empirical evidence, but by the inability of population scientists to account for demographic shifts in post-colonial countries, whose death rates had fallen without a corresponding decrease in birth rates. This led prominent demographers to advocate for population control measures. A landmark study by Ansley Coale and Edgar Hoover in 1958 projected the impact of fertility levels on per capita income in developing countries. Cook used this study as an artefact in his performance of expertise, but misconstrued its modest conclusions as definitive proof that population growth impeded economic development. To manage the national security risks of the population explosion, he argued that the US government ought to assist other countries in developing population control programmes.

The scientific narrative of the population explosion was incorporated into the Draper Committee's final report, which marked its first appearance in a major government publication. While Eisenhower privately accepted aspects of this narrative, he publicly rejected its suggestion that the US should intervene to manage the risk of population growth in the developing world. This was due to his concerns over alienating Catholic voters in the upcoming presidential election.

Historical background

By the turn of the 20th century, demography had broken away from both political economy and Malthusian theory. Its adherents focused on explaining fertility decline in Western Europe and America by linking it to urbanisation, social class, and rising living standards.²⁷ The core claims of DTT were well established by the 1930s, but the theory itself was not

²⁷ Hodgson (1983), p. 5.

formalised until the 1940s, as demographers at the Princeton's Office of Population Research extended its scope beyond the industrialised world.²⁸ Like their predecessors, Frank Notestein, Kingsley Davis, and Dudley Kirk initially held that demographic change followed industrialisation. Societies passed through three stages: a pre-industrial stage characterised by high birth and death rates; an transitory stage in which death rates collapsed, but the birth rate remained high; and a final stage in which both variables stabilised at a low rate. In other words, fertility depended on socioeconomic development.²⁹ Davis and Notestein's work reflected this view until the mid-1940s: in 1944, Notestein remarked that, as all societies practiced some form of birth control, high fertility could not result from lack of access to contraceptives. Only industrialisation could lower birth rates: 'It is only when rising levels of living, improving health, increasing education and rising hope for the future give new value to the individual life that old customs break and fertility comes under control'.³⁰

This narrative changed during the immediate postwar period. The Princeton demographers turned their attention to populations in post-colonial societies, where a dramatic decline in mortality rates had occurred even though full-scale industrialisation had not taken place. To account for this, Notestein and Davis now construed fertility as an independent variable. They argued that rapid population growth 'was a cause of continued underdevelopment' which would prevent countries from reaching the final stage of the demographic transition.³¹ By the early fifties, both were advocating for national family planning programmes to reduce fertility.³² The different stages identified by demographic transition theory remained the

²⁸ Ibid. pp. 7-8.

²⁹ Teitelbaum (1975).

³⁰ Quoted in Hodgson (1983), p. 11.

³¹ Hodgson (1983), p. 13.

³² Ibid. pp. 13-20.

same, but the transition to stable, ‘low pressure’ population equilibrium would be brought about by lowering fertility instead of industrialisation.³³

Performance: backstage

In 1952, the president of the World Bank, Eugene Black, asked Frank Notestein to produce a leaflet explaining to leaders in developing countries how high population growth could impede economic progress. Notestein confessed that ‘there was no empirical evidence’ for this, even though, as Merchant points out, ‘he had been making the same contention for the past five years’.³⁴ The World Bank then sponsored an Office for Population Research study into the relationship between population growth and economic development in low-income countries. This project was led by Ansley Coale, a demographer, and Edgar Hoover, an economist. They selected India and Mexico for the study. To estimate how a large difference in fertility would impact economic growth, they made two projections for each country: one that assumed continuing high rates of fertility, and the other a 50 percent decline in fertility in twenty-five years.³⁵ After thirty years, they estimated that the first scenario would lead to an increase in per capita income of 38 percent, while the second would result in a 95 percent increase.³⁶ In other words, ‘the study did not show that population growth would prevent economic growth, only that a reduction in population growth could enhance it’.³⁷

³³ Szreter (1993), p. 662.

³⁴ Merchant (2015), p. 324. I credit Merchant with first identifying the discrepancy between the actual and publicised findings of the Coale-Hoover study.

³⁵ Coale (2000), pp. 34-38.

³⁶ Coale and Hoover (1958).

³⁷ Merchant (2015), p. 327.

Furthermore, verifying the accuracy of these projections was impossible, ‘because only one fertility trajectory is followed in each population’.³⁸

Coale and Hoover’s research was published in 1958 as *Population Growth and Economic Development in Low-Income Countries*. It was touted by proponents of population control as proof that population growth impeded economic development. However, this was not what the study claimed. As Coale later explained: ‘our conclusion indicated significant prospective economic progress even with continued high fertility’.³⁹ One nonprofit organisation that strategically distorted the findings of the Coale-Hoover report was the Population Reference Bureau (PRB), which published digests of demographic data and research for public consumption.⁴⁰ It alleged that, if India’s fertility levels did not decrease, ‘economic development will be stifled by the sheer number of people, and India will not achieve that breakthrough to a better life for her people that her Five-Year Plans envision. Rather, she will be much more deeply engulfed in the morass of poverty and misery’.⁴¹

Hugh Moore was a major benefactor of the PRB. In the performance of expertise before the Draper Committee, Moore exercised directive dominance, leveraging his social connections to place a favoured expert in a position to influence the Committee. ‘If your committee does not look into the impact and implications of the population explosion’, he warned Draper, ‘you will be derelict in your duty’.⁴² Moore then invited Draper to a private briefing by Cook at his New York apartment, following which Draper appointed Cook as the Committee’s only

³⁸ Coale (2000), p. 38.

³⁹ Ibid. p. 37.

⁴⁰ The PRB was founded in 1929 by the prominent eugenicist Guy Irving Burch.

⁴¹ Quoted in Merchant (2015), p. 331.

⁴² Quoted in Piotrow (1973), p. 38. Years later, Draper remembered how Moore ‘practically forced the so-called Draper Committee to speak its piece on population problems’. Quoted in Critchlow (1999), p. 42.

consultant on population matters. In this position, Cook was able to control the flow of scientific material on population to the Committee's members and staff, as well as dominate the drama.⁴³

Performance: front stage

On 30 December 1958, Cook distributed three items to the members and staff of the Draper Committee: his report, 'The Impact of Population Growth on the Strength of the Free World'; Hugh Moore's pamphlet, 'The Population Bomb', and a PRB bulletin summarising the Coale-Hoover study.

First published in 1954, 'The Population Bomb' was mass-mailed to 1.5 million Americans.⁴⁴ It was an unusual artefact in several ways. It wrapped a scientific narrative in highly polemical language, with a format that combined aspects of a campaign leaflet and an executive report. Its intended audience was the general public, but it identified the US government as the main catalyst for change. Moore's campaign to raise awareness about the population explosion, which included taking out full page newspaper advertisements, vexed other population establishment members, even though most agreed with his assessment and aims. As he explained to Rockefeller: 'We are not primarily interested in the sociological or humanitarian aspects of birth control. We are interested in the use of which the Communists make of hungry people in their drive to conquer the earth'.⁴⁵ Population Council staff members engaged in boundary maintenance, working with Moore to dial back the pamphlet's anti-Communist

⁴³ Moore, 'Letter to Will Clayton', 21 December 1960. Hugh Moore Fund Collection; Critchlow (1999), p. 43.

⁴⁴ Merchant (2015), p. 321.

⁴⁵ Moore et al., 'Letter to John D. Rockefeller 3rd', 26 November 1954. Rockefeller Archive Centre.

rhetoric, and highlighting instead how population control could serve American interests by accelerating economic development in the global South.⁴⁶

‘The Population Bomb’ opened with an unnerving chart showing how world population had changed between 500 AD and the mid-1950s. Growth was depicted as steady until about 1900, increasing exponentially thereafter. To dramatise this, the top of the curve broke through the y-axis. This ‘population explosion’ was explained using demographic transition theory. Underdeveloped countries in Asia, Latin America, and Africa were identified as being in the second stage of ‘rapid population increase...with the peak still ahead of them’. It painted an undesirable future of food shortages and economic stagnation as both agricultural output and capital investment failed to keep pace with high population growth. This would drive developing countries towards war or civil unrest, and make them more receptive to the ‘blandishments of Moscow’, which would inevitably exploit such conditions to expand its influence. The population explosion therefore risked American national security: ‘In these areas must be secured many of the resources that are needed to sustain the free world’s economy...it is important that leaders...interest themselves in the deadly triangle of war, Communism and world population’. The pamphlet’s authors called for the American government to intervene by sponsoring research into ‘a new, simple, cheap, safe and widely acceptable contraceptive’, which they assumed would be eagerly welcomed by countries desperate to control their population growth.⁴⁷

Cook’s report recycled many elements of the narrative in the ‘The Population Bomb’, but focused on the demographic situation in India and Ceylon. He maintained, inaccurately, that

⁴⁶ Merchant (2015), p. 324.

⁴⁷ Moore, ‘Committee Mailing No. 13: The Population Bomb’, 30 December 1958. Eisenhower Presidential Library.

the Coale-Hoover study 'clearly indicates that unless the Indian birth rate drops sharply...there is little hope for an economic breakthrough to a higher level of living'. The situation in India was 'typical of all the agrarian, economic underdeveloped countries of Asia, Africa and Latin America', even though there was no empirical basis for this assertion. In general, countries experiencing high growth would suffer from an 'enormous preponderance of children' who would absorb capital into 'non-productive uses'. Given this dire outlook, any approach to military assistance or economic rehabilitation 'must give ardent consideration to dealing with this problem'. This could not be solved via 'mass migration, industrialisation or increased production of food' but by controlling fertility. The American government could encourage this by helping countries develop educational programmes and supplying other forms of technical assistance on an informal basis. Unlike Moore, however, Cook suggested that direct participation by the US government in developing methods of birth control was 'inadvisable'.⁴⁸

Political effects

The Draper Committee's report

The immediate effect of this performance of expertise was to convert Draper from an audience member into a collaborator. It also introduced the scientific narrative of the population explosion into policy discourse via the Draper Committee's report. Moore would later boast that this was 'the first time...that any officially appointed person or group of the Administration has ever even admitted the existence of the problem'.⁴⁹ The material Cook supplied heavily influenced the final study completed by the Committee's staff. This adopted

⁴⁸ Cook, 'Committee Mailing No. 13: The Impact of Population Growth on the Strength of the Free World', 30 December 1958. Eisenhower Presidential Library.

⁴⁹ Moore, 'Letter to Will Clayton', 30 July 1959. Hugh Moore Fund Collection.

the title ‘The Population Explosion’, used India and Ceylon to showcase how population growth retarded economic development, and repeated the PRB’s misleading summary of Coale and Hoover’s work: ‘in spite of significant over-all economic gains, the standard of living is rapidly slipping...because of excessive population increases’.⁵⁰ The ‘best solution’ to the population problem would be

an inexpensive and safe material which, if taken once a month, would prevent ovulation. As far as is known, no such material is available at present. It appears reasonable...to assume that such a material could be found if sufficient technical effort were applied...the necessary effort can only be obtained through government leadership and support.⁵¹

The staff study laid the foundation for the recommendations contained in the final report’s section on ‘the population question’, which announced that ‘no realistic discussion of economic development can fail to note that development efforts in many areas of the world are being offset by increasingly rapid population growth’. Citing UN figures, it attributed this to plunging mortality rates in the face of persistently high fertility rates. Confronted by food and other shortages, leaders in other countries were realising that ‘the only hope for their people lies in accelerating the normal adjustment to the rapidly declining mortality rate’.⁵²

The Committee then proposed that the US government intervene in three ways: help countries receiving economic aid to formulate policies to deal with population growth; increase assistance to local maternal and child welfare programmes; and strongly support research ‘leading to the availability of relevant information in a form most useful to individual countries in the formulation of practical programmes to meet the serious challenge posed by

⁵⁰ Adams, ‘The Population Explosion’, 15 June 1959. Eisenhower Presidential Library.

⁵¹ Ibid.

⁵² Draper Committee, ‘Composite Report of the President’s Committee to Study the United States Military Assistance Program, Volume I’, 17 August 1959. Eisenhower Presidential Library.

rapidly expanding populations'.⁵³ The only recommendation in the staff study that did not appear in the final report proposed government research into 'the physiology of human reproduction', with the aim of developing more effective forms of birth control. This was omitted at the request of General Alfred Gruenther, a devout Catholic 'who was unwilling to sign a report that the church might condemn'.⁵⁴

Presidential rhetoric

Eisenhower's private remarks suggest he accepted that part of the scientific narrative which identified the population explosion as a national security risk. At a meeting of the National Security Council to discuss the Mutual Security Program, he said: 'in all our discussions of the problem of underdeveloped countries and the kind of assistance which we could effectively provide them, we had not faced up to what was really the most serious problem, namely, that of exploding population growths'. He also accepted that some form of intervention was required: 'the only solution to this problem throughout the world was finding an effective two cent contraceptive...certainly something drastic had to be done to solve this problem'. Without this, 'no matter what we do, as these reports indicate, we keep falling behind in our efforts to raise the standard of living in so many parts of the world where it is desperately low'.⁵⁵

The Draper Committee's findings were publicised in late 1959. When asked to comment on its recommendations regarding overpopulation at a press conference, Eisenhower rejected the narrative's designation of the US government as the actor responsible for intervening to

⁵³ Ibid. pp. 96-97.

⁵⁴ Piotrow (1973), pp. 39-40.

⁵⁵ NSC, 'Memorandum of Discussion at the 388th Meeting of the National Security Council', 3 December 1958. *FRUS*.

manage population growth in the developing world. He did this by invoking respect for religious beliefs, as well as the international norm of non-intervention:

We do not intend to interfere with the internal affairs of any other government...I cannot imagine anything more emphatically a subject that is not a proper political or governmental activity or function or responsibility...This Government has no, and will not make, [for] as long as I am here...a positive political doctrine in its programme that has to do with this problem of birth control. That's not our business.⁵⁶

His officials also went to great lengths to reassure the public that 'not one penny of foreign aid funds has ever been used for dissemination of birth control information and there are no plans to do so'.⁵⁷

This public repudiation was driven by domestic political concerns. The Draper Report was published in the lead up to the 1960 presidential elections. At the time, the American public viewed the population establishment's proposed intervention — birth control — as a moral and religious matter.⁵⁸ The Catholic Church launched a vicious campaign attacking foreign aid for birth control — which the report had not actually recommended. A week before Eisenhower's press conference, America's leading bishops railed against 'artificial birth control', calling it 'morally evil' and describing its promotion as 'a disastrous approach to the population problem'. They vowed 'not [to] support any public assistance...to promote artificial birth prevention, abortion or sterilisation, whether through direct aid or by means of international organisation'.⁵⁹ Their reaction to the report transformed foreign aid for birth control into a controversial campaign issue.

⁵⁶ 'Transcript of the President's News Conference on Foreign and Domestic Matters', 3 December 1959. *MIT*.

⁵⁷ 'Wagner Opposes Birth Curb Funds', 1 December 1959. *MIT*.

⁵⁸ See Reed (1984); Critchlow (1999), Chapter 1.

⁵⁹ 'Statement by Roman Catholic Bishops of U.S. on Birth Control', 26 November 1959. *MIT*.

The population establishment defined birth control as a technoscientific solution to a national security risk, while the bishops framed it as a moral transgression. In his public statements, Eisenhower appeared to accept the bishops' claim to moral authority over the population establishment's claim to epistemic authority. At the December press conference, he recognised that the prohibition on birth control was a 'religious tenet' and stressed that he had 'great respect' for the Catholic Church's position.⁶⁰ Eisenhower may have genuinely thought it inappropriate for the American government to interfere in peoples' reproductive decisions, but his post-presidential activities suggest that this conviction was weakly held at best. In 1964, he agreed to co-chair the Honorary Sponsors Committee of the Planned Parenthood Foundation, an organisation promoting birth control.⁶¹ Privately, he endorsed compulsory sterilisation for mothers receiving welfare who had a second illegitimate child.⁶²

It is likely that Eisenhower was trying to avoid giving Catholic voters an additional reason to support Kennedy. American Catholics traditionally voted Democrat, but Eisenhower had won just under half the Catholic vote in the 1952 and 1956 presidential elections. He also had unusually good relations with the Catholic clergy.⁶³ Days before the press conference, Kennedy, a Catholic, had said that it would be a 'mistake' for the US government to 'advocate birth control in other countries'.⁶⁴ Eisenhower was not campaigning for reelection, and only belatedly endorsed Vice-President Richard Nixon's candidacy. However, he disliked Kennedy, who had been a vocal critic of his administration, and at one point said 'I'll do

⁶⁰ 'Transcript of the President's News Conference on Foreign and Domestic Matters', 3 December 1959. *NYT*.

⁶¹ Draper, 'Letter to General Eisenhower', 18 November 1964. Eisenhower Presidential Library.

⁶² Eisenhower, 'Letter to J. Earl Schaffer', 28 August 1967. Eisenhower Presidential Library.

⁶³ Jones (2004).

⁶⁴ Reston, 'Kennedy opposes advocacy by U.S. of birth control', 28 November 1959. *NYT*.

almost anything to avoid turning this country over to Kennedy'.⁶⁵ As he later explained to General Draper:

[I]t was an election year and he [Eisenhower] thought that Senator Kennedy was going to be running for President. With the Catholic Bishops attacking this particular recommendation, President Eisenhower feared that if he approved our recommendation and if Kennedy, as a Catholic, attacked it this might split the American people on a religious issue in a national political campaign; and he thought this would be bad for the American people.⁶⁶

By inciting national controversy around the issue of foreign aid for birth control, the bishops raised for Eisenhower the perceived costs of endorsing and implementing the Draper Committee's recommendations. To counter this, Eisenhower not only rejected the narrow recommendations contained in the Committee's report, but also the prospect of any foreign aid for promoting, distributing, or researching birth control technology. Consequently, although the scientific narrative of the population explosion was largely accepted by the population establishment's intended audience of key policymakers, their proposed intervention had little chance of being implemented.

3. 'Prevented births' (1965-1968)

US population policy towards the developing world officially began during the Johnson administration. After his landslide election victory, LBJ ignored his advisors' pleas to address global population issues.⁶⁷ He also rebuffed Draper and Rockefeller's attempts to secure a

⁶⁵ Filipink (2014).

⁶⁶ Hess, 'Oral History Interview with General William H. Draper, Jr.', 11 January 1972. Harry S. Truman Presidential Library. Draper made similar comments when interviewed by Phyllis Piotrow in December 1959. See Piotrow (1973), p. 46.

⁶⁷ Connelly (2014).

Presidential Commission on Population, refusing even to meet with them.⁶⁸ His State of the Union Address included a sop to ‘seek new ways to use our knowledge to help deal with the explosion of world population’ — phrasing that avoided concrete action.⁶⁹ But that June, Johnson suddenly changed his tune. Over the next year, he would make twenty-three statements warning of the dangers of the population explosion and the need for America to assist population control programmes in developing countries.⁷⁰

I argue that President Johnson’s unexpected embrace of population assistance hinged on a single study by the economist Stephen Enke. Enke argued that children were a net drain on a developing economy. Therefore, investing in measures preventing their birth was a more cost-efficient way of promoting economic development than traditional forms of investment, such as in infrastructure. Enke’s logic of prevented births extended the broader scientific narrative of the population explosion by portraying population assistance as a more effective use of aid dollars. Similar research by Enke had proved controversial among his peers, who questioned the validity of his arguments. Nonetheless, Robert Komer, a senior NSC staffer, presented Enke’s ‘prevented births’ paper to LBJ because it offered a compelling narrative of ‘hard dollars and cents’ at a time when the government was confronting a growing balance of payments crisis.⁷¹

Johnson’s public commitment to population assistance marked the beginning of a concerted effort by the United States to govern global population, though certain initiatives were shelved

⁶⁸ Johnson’s Special Assistant, Jack Valenti, told Rockefeller and Draper that ‘this is not an issue that the President visibly wants to touch at this time’. Quoted in *ibid.* p. 147. See also Piotrow (1973), pp. 88-89.

⁶⁹ Johnson, ‘Annual Message to the Congress on the State of the Union’, 4 January 1965. TAPP.

⁷⁰ Claxton, ‘Statement of Policy on Population Matters: Action Memorandum, Tab A’, 23 November 1966. National Archives at College Park (hereafter NACP).

⁷¹ Komer, ‘Memorandum for McGeorge Bundy’, 27 April 1965. Lyndon Baines Johnson Presidential Library (hereafter Johnson Presidential Library).

in order to avoid upsetting the Catholic Church. Senior officials who had been lobbying for such an effort without success now swung into action. A new diplomatic regime of practice linked population control to negotiations over foreign aid. To continue receiving US government support, including disbursements of food aid under the Food for Peace Act, developing countries had to demonstrate that they were implementing adequate measures to tackle their growing populations. Johnson's rhetoric also legitimised congressional efforts to earmark the first funds for population assistance. These were to be dispensed by USAID in accordance with foreign policy set by the executive branch.⁷² However, the agency's lack of organisational capacity and its leadership's resistance meant that it did not begin doing so until two years later, in 1967.

Performance: backstage

In this performance of expertise, Robert Komer exercised directive dominance, while Enke exercised dramatic dominance. Enke was a researcher at the RAND Corporation; his cost-benefit analyses of family planning programmes, especially in India, had brought him to the attention of the population establishment in the early 1960s.⁷³ His working paper, 'Lower Birth Rates — Some Economic Aspects', was finished in February 1965 during a stint as a consultant at USAID, although never published.⁷⁴ Two months later, it landed on Komer's desk.⁷⁵ Enthused by its claims, Komer then wrote to Hollis Chenery, a development

⁷² USAID (2015).

⁷³ Moore, 'Letter to Will Clayton', 21 December 1960. Hugh Moore Fund Collection. In 1964, Enke also presented his arguments to officers at the International Planned Parenthood Foundation and the Ford Foundation at the First International Conference on Voluntary Sterilisation in 1964. See Connelly (2008), p. 207.

⁷⁴ A review of Enke's publications from 1960-1965 found nothing that matched this title, but other papers make a similar argument. For example, Enke (1960a, 1960b).

⁷⁵ How it reached him is not known.

economist at Harvard University. He wondered whether '[Enke's] conclusions that population control aid would be 100 times more effective than development aid in raising per capita income will stand up', and asked Chenery and his Harvard colleagues to give the Enke study 'an informal reading'.⁷⁶

Komer's request did not reflect a sincere effort to corroborate Enke's conclusions. The day *before* contacting Chenery, Komer had already dispatched Enke's study to the President's Special Assistant for National Security Affairs, McGeorge Bundy. He called it 'a little flank attack that I think might just penetrate LBJ's defences. It's a hard dollar and cents argument for taking a more serious view of birth control in the [Less Developed Countries]. Any harm in just trying this out on LBJ?'⁷⁷ Komer also sent the study to Bill Moyers, the White House Press Secretary, remarking that 'a discreet but well-financed effort among our clients abroad...would pay great dividends'. He conceded that 'this is the view of just one RAND economist', but mentioned that he had asked Chenery to review Enke's work.⁷⁸ I found no evidence that Chenery ever replied — and certainly not before Komer sent the study on to Bundy, Moyers, and LBJ himself.

The soundness of Enke's research was clearly of secondary importance to Komer. A cursory review of academic journals would have surfaced an ongoing debate between Enke and the demographer Paul Demeny, who questioned Enke's assumptions about economic activity in developing countries.⁷⁹ As Komer put it to Moyers: 'even if off by 50%, [Enke's study] would justify a much bigger effort at population control as the most important handmaiden of

⁷⁶ Komer, 'Letter to Hollis Chenery', 28 April 1965. Johnson Presidential Library.

⁷⁷ Komer, 'Memorandum for McGeorge Bundy', 27 April 1965. Johnson Presidential Library.

⁷⁸ Komer, 'Memorandum for Bill Moyers', 28 April 1965. Johnson Presidential Library.

⁷⁹ For example, Demeny (1961).

development'.⁸⁰ Komer could have presented senior policymakers with a range of vetted studies, framed by a measured discussion of their strengths, weaknesses, and policy implications. At a minimum, he could have waited for Chenery's response. Instead, he selected Enke's paper because the narrative it imparted directly addressed a major concern of his target audience, LBJ: that foreign aid was being spent inefficiently. He then ensured that the study received special attention from senior policymakers over other available research.

Performance: front stage

Komer's presentation of Enke's study to LBJ demonstrates how a textual performance of expertise can be effectively deployed as an artefact in a later performance. There is no evidence to suggest that Komer actively collaborated with Enke, but he was a strong ally of the population establishment within the administration. I first explain the scientific narrative of prevented births. Then I show how Komer repackaged Enke's work in order to convince LBJ to publicly endorse population assistance to the developing world.

Enke's 'prevented births' paper⁸¹

Enke's paper rendered a brutal suggestion in dispassionate terms: that the most efficient way to spend US aid dollars was by supporting family planning programmes that prevented children in the developing world from being born. Using standard economic models plus a number of 'plausible' conjectures, Enke predicted that population growth in a typical developing country would lead to a sharp fall in worker consumption: 'a 12% increase in population and employed labour force result in a 6% increase in output attributable to them.

⁸⁰ Ibid.

⁸¹ This subsection adapts material from my MPhil thesis. Some of the original wording is retained, although modifications have been made. See Young (2016), pp. 72-75.

Thus, for all age brackets together, an extra population means proportionately less increase in output than increase in consumers'.⁸² For countries with '(a) high rates of natural increase, (b) high population densities in terms of agricultural and other economic resources, and (c) too numerous and distinct a population for emigration to provide adequate relief', there was 'little time' to avoid an undesirable future that was 'so widely recognised among policymakers that only a few magnitudes deserve repetition'.⁸³

Calculating prevented births was a technique of prospection *par excellence*, for it relied 'on a host of other forecasts and probabilities' to 'conjure something profoundly immaterial...predicting forward to events that would not happen'.⁸⁴ Enke calculated the 'present value' of a child by subtracting the discounted present value of her or his consumption from the discounted present value of the income that she or he would earn as a worker. He concluded that infants had a negative value to a developing country, and preventing them from being born would save the economy \$279 on average. Moreover, 'a \$4 vasectomy would have an impact on per capita GNP equivalent to \$1,000 invested in infrastructure'.⁸⁵ He recommended that developing governments should pay citizens for undergoing vasectomies, using IUDs, or simply staying 'non-pregnant', comparing this to a transfer payment that rewarded those who did not commit the 'anti-social' act of reproduction.⁸⁶

Komer's covering memorandum

Komer's covering memorandum built on Enke's performance of expertise by explicitly advocating for US intervention in the form of population assistance. Enke had hinted at this

⁸² Enke, 'Lower Birth Rates — Some Economic Aspects', 12 February 1965. Johnson Presidential Library.

⁸³ Ibid.

⁸⁴ Murphy (2017), p. 48.

⁸⁵ Connelly (2008), pp. 211-212

⁸⁶ Enke, 'Lower Birth Rates — Some Economic Aspects', 12 February 1965. Johnson Presidential Library.

with a table showing that family planning programmes in developing countries would cost a fraction of the aid they received from the US. For Brazil, with a population of eighty million, he estimated that a family planning programme would cost \$8 million annually: a mere 5.2 percent of US economic assistance and 0.4 percent of the country's total development expenditure.⁸⁷ When pitching the study to Johnson, Komer avoided mentioning incentive payments for sterilisation or the 'negative present value' of a child. Instead, he remarked that

if economic resources in many [less developed countries] were devoted to retarding population growth rather than accelerating production growth, *these resources could be 100 times more effective in raising output per capita!* In many of these countries, spending only about one percent of their present overall development outlays on reducing births could be as effective in raising per capita output as the other 99%.⁸⁸

Komer then drew a direct link to American national interests. The Great Society and the Vietnam War were draining federal coffers at an alarming rate; a serious balance of payments crisis loomed, and Johnson was searching for ways to reduce foreign expenditure.⁸⁹ Supporting population control programmes in development countries would have

Immense significance for areas where we are investing massive amounts of development capital...the longer term foreign aid burden on us could be greatly foreshortened...the relevance of figures like the above to the achievement of our foreign aid goals is so striking that you may want to consider ways and means of gradually using our foreign aid more as an incentive to major efforts in this field by the LDCs themselves.⁹⁰

Komer also included a summary of recent polls on attitudes to family planning and foreign aid for birth control, which showed that public opinion had swung in favour of both.⁹¹ Just

⁸⁷ Ibid.

⁸⁸ Komer, 'Memorandum for the President', 27 April 1965. Johnson Presidential Library.

⁸⁹ See Kaufman (1987); Collins (1996).

⁹⁰ Komer, 'Memorandum for the President', 27 April 1965. Johnson Presidential Library.

⁹¹ Some of this data was supplied by the Gallup organisation. Hugh Moore and George Gallup had been corresponding about the need to raise public awareness about the population explosion since 1963. These discussions may have been a factor in the decision to commission these polls. Gallup wrote: 'We too were quite disturbed to find so few people worried about the population explosion. This is a clear indication that a lot of

over half of those polled answered ‘yes’ when asked if rapid population growth was a threat to world peace and security, and if the United States should help other countries limit their population growth by controlling family size. In addition, 78 percent of Catholic respondents believed that birth control information should be freely available, while just over half thought that their church should permit the use of birth control devices.⁹²

Political effects

The following subsections trace the effects of this performance of expertise on presidential rhetoric, diplomatic strategy, foreign aid appropriations by Congress, and the provision of population assistance by the Agency for International Development.

Presidential rhetoric

It is not clear when President Johnson received Enke’s paper and the Gallup poll summary, whether he read the entire study or just Komer’s covering letter, or what his immediate reaction was. However, Komer’s ‘flank attack’ appears to have been highly effective: from June onwards, Johnson publicly committed the US to provide population assistance to developing countries. In his speech before the UN General Assembly that summer, he repeated the scientific narrative of prevented births almost verbatim: ‘Let us act on the fact that less than five dollars invested in population control is worth a hundred dollars invested in economic growth’.⁹³ Privately, he declared: ‘I’m not going to piss away foreign aid in nations where they refuse to deal with their own population problems’.⁹⁴ The following year,

work needs to be done to educate the American public’. Gallup, ‘Letter to Hugh Moore’, 14 August 1963. Hugh Moore Fund Collection.

⁹² Office of Technical Cooperation and Research, ‘Summaries of recent polls concerning birth control’, 7 April 1965. Johnson Presidential Library.

⁹³ Johnson, ‘Address in San Francisco’, 25 June 1965. TAPP.

⁹⁴ Califano (2000), p. 150.

he devoted a large section of his speech to Congress on foreign aid to population growth in the developing world. America, he announced, ‘stand[s] ready to help developing countries deal with the population problem’, which he claimed was absorbing ‘about two-thirds of economic growth’.⁹⁵

Johnson spoke out repeatedly in favour of population assistance, although his support for certain initiatives was tempered by a desire to avoid aggravating Catholic Church leadership. When the Church raised the costs of acting on the population establishment’s recommendations, they fell by the wayside. In September 1966, John D. Rockefeller III, founder of the Population Council, wrote to Secretary of State Dean Rusk proposing a World Leader’s Declaration on Population. The Declaration conveyed the impression of a global consensus on the population problem as set out by the population establishment.⁹⁶ It stated that explosive population growth created a ‘situation unique in human affairs and a problem that grows more urgent with each passing day’, which would impede everything from education to housing, transport, health, and even ‘cultural and recreational opportunities’. Signatories accepted the population problem ‘as a principal element in long-range national planning if governments are to achieve their economic goals’, and supported family planning as being ‘in the vital interest of both the nation and the family’.⁹⁷ Given that America was the Western superpower, and American organisations like the Rockefeller Foundation contributed the bulk of population assistance to the developing world, Johnson’s signature carried immense weight.

⁹⁵ Johnson, ‘Special Message to the Congress on the Foreign Aid Program’, 1 February 1966. TAPP.

⁹⁶ Rockefeller, ‘Letter to Dean Rusk’, 13 September 1966. NACP.

⁹⁷ Rockefeller, ‘Draft World Leader’s Declaration on Population’, 22 July 1966. NACP.

Thinking that the president, like Rusk, supported his initiative, Rockefeller sent the letter to Johnson in early December, only to be informed five days later that he had decided against signing.⁹⁸ This abrupt reversal of position was probably to avoid provoking Catholic leadership. In mid-November, the National Conference of Catholic Bishops had denounced government 'coercion' of the poor into accepting birth control at home and overseas. American support for 'programmes inhibiting new life...when linked to offers of desperately needed aid', would be 'gravely detrimental to the image, the moral prestige and the basic interests of the United States'.⁹⁹

In response to this, Johnson asked his Special Assistant for Domestic Affairs, Joseph Califano, to 'work something out so he could pursue his policies without attack from the bishops'. He prioritised appeasing the Catholics 'because before long they may be the only allies we have on the Negro rights and the poverty programme'. Califano came to an 'uneasy truce' with Father Hurley, the bishops' representative: 'if the President and the administration would portray their efforts in terms of "the population problem" rather than "birth control" or "population control," Hurley would do all he could to get the bishops to lie back'.¹⁰⁰ Johnson eventually signed the Declaration in 1967, but only after Pope Paul IV's Encyclical explicitly recognised the negative impact of an 'accelerated demographic increase' on development,

⁹⁸ Rusk, 'Letter to John D. Rockefeller 3rd', 28 September 1966; 'Telegram 2947 from USUN to Department of State', 6 December 1966; 'Telegram 99962 to USUN from Department of State', 9 December 1966. All in NACP.

⁹⁹ National Conference of Catholic Bishops, 'Text of Bishop's Statement on Government and Birth Control', 15 November 1966. *NYT*.

¹⁰⁰ Califano (2000), p. 153.

and legitimised government intervention ‘within the bounds of their competence’.¹⁰¹ Even then, references to ‘birth control’ and ‘contraceptive’ were omitted.¹⁰²

The Food for Peace Act

The scientific narrative of prevented births also legitimised the administration’s ‘short-leash’ approach to distributing food aid to developing countries under the Food for Peace programme. The programme, which was overhauled in 1966 by the Food for Peace Act, identified ‘sound population programmes’ as ‘vital to meeting the food crisis’ as well as broader development efforts.¹⁰³ It explicitly authorised the use of federal funds to finance ‘activities...related to the problems of population growth’ when requested by recipient nations.¹⁰⁴

A new diplomatic regime of practice was also implemented. Ambassadors and USAID mission chiefs around the world were asked to prioritise ‘the population crisis’, to lean on local governments whom they felt were failing to respond satisfactorily to this crisis, and to insinuate that food aid was contingent on the implementation of an effective population control programme.¹⁰⁵ They were also empowered to offer generous technical assistance, transportation, and equipment to support such schemes. The overarching aim was for each

¹⁰¹ ‘Encyclical of Pope Paul VI on the Development of Peoples’, 26 March 1967. Papal Encyclicals Online.

¹⁰² Claxton, ‘Statement of Policy on Population Matters: Action Memorandum, Tab A’, 23 November 1966. NACP.

¹⁰³ Johnson, ‘Statement by the President Upon Signing the Food for Peace Act of 1966’, 12 November 1966. TAPP.

¹⁰⁴ ‘Food for Peace Act (Public Law 89-808)’, 11 November 1966.

¹⁰⁵ These instructions were distributed via an airgram drafted by Claxton. The draft was sent to the Secretary of State on 2 November 1966 and approved by the Secretary of State on 2 December 1966. See Rusk, ‘Increased Responsibilities of the Department of State, AID and Missions in Population Matters’, 20 December 1966; Claxton, ‘Statement of Policy on Population Matters: Action Memorandum’, 2 November 1966. Both in the Declassified Documents Reference System (hereafter DDRS).

country to instigate measures which could reduce birth rates to the extent that population growth would fall to below 2 percent per year, until the rate of economic growth stabilised.¹⁰⁶

India, a major recipient of food aid from the United States, became a pilot case for ‘hinging aid to performance’, with Johnson approving shipments of food on a monthly basis.¹⁰⁷

Population control featured prominently in his negotiations with the Indian Prime Minister Indira Gandhi during her visit to Washington in early 1966.¹⁰⁸ Backed by a consortium of international donors including USAID, the World Bank, and the UN Population Fund, her government was already part way through a national campaign to implant IUDs in some twenty million women.¹⁰⁹ In the 1970s, Gandhi’s government would embark on a mass sterilisation programme that would reach a fever pitch during the Emergency Period of 1975 to 1977. Tens of millions of Indians, disproportionately the rural poor, were offered cash payments to undergo vasectomies and hysterectomies. These procedures were often carried out in dangerously unsanitary conditions by officials under intense pressure to meet local quotas.¹¹⁰ Although the US government did not directly support these programmes, it did define successful population control as a key component of the ‘self-help’ necessary to release further tranches of assistance, thus incentivising Indian officials to pursue increasingly extreme measures to lower fertility.¹¹¹

¹⁰⁶ Ibid.

¹⁰⁷ Califano (2000), p. 150. See also Ahlberg (2007).

¹⁰⁸ Rusk, ‘Visit of Prime Minister Indira Gandhi of India, March 27-April 1 A966: Strategy Paper’, 21 March 1966. Johnson Presidential Library.

¹⁰⁹ Connelly (2006).

¹¹⁰ See accounts in Vicziany (1982a, 1982b); Williams (2014).

¹¹¹ Connelly (2006).

Congressional action

By publicly accepting population assistance as a legitimate government activity, Johnson emboldened legislators who were already alarmed by the population explosion to act on their concerns. Between 1965 and 1968, Senator Ernest Gruening organised a series of high-profile ‘Population Crisis’ hearings before the Senate Subcommittee on Foreign Aid Expenditures. He invariably commenced these with ‘a new quotation from President Johnson [on population] and a word of praise for the president’s foresight’.¹¹² A parade of witnesses offered wide-ranging testimony on domestic and overseas population problems. Gruening’s own line of questioning invoked tropes of freedom of choice and equality of opportunity that were central to American political life. As Piotrow argues, he successfully reframed access to birth control information in the United States as a right instead of a government infringement on that right; this in turn legitimised US support for similar initiatives overseas. As Chairman of the Senate Subcommittee on Foreign Aid Expenditures, he oversaw the first disbursements of funds for USAID to use in population assistance.¹¹³

Gruening’s efforts were complemented by Senator J. William Fulbright, the powerful chair of the Senate Foreign Relations Committee. With General Draper’s support, he introduced a Senate bill that added Title X to the 1961 Foreign Assistance Act. This earmarked funds for population assistance — a move designed to ‘counteract any possible tendency for [USAID]...to regard family planning as a fringe operation’.¹¹⁴ The initial appropriation was set at \$50 million, but was amended to \$20 million on the House floor by Representative

¹¹² Piotrow (1973), p. 108.

¹¹³ Ibid. p. 105.

¹¹⁴ Ibid. p. 134.

James Fulton, who cited a letter from USAID Administrator William Gaud arguing that such large funds were not necessary.¹¹⁵

The Agency for International Development

USAID was responsible for enacting US population policy, but resistance from its leadership and its inadequate organisational capacity meant that implementation continually fell short of the expectations of the legislature and the executive.

In 1965, AID announced that ‘technical assistance in family planning would be available to countries requesting it’, but it did not identify population as a ‘priority programme’.¹¹⁶ The first three Administrators of USAID accepted the existence of a ‘population explosion’ in the developing world, but rejected the scale and the utility of the proposed interventions. Fowler Hamilton categorically refused to promote family planning overseas. His successor, David Bell, encouraged the creation of various government advisory committees on foreign aid to address population issues, but insisted that ‘the programme be an inconspicuous, relatively minor part of AID’s activity’.¹¹⁷ He also told the House Foreign Affairs Committee that he foresaw no major shakeup of AID population activities in the immediate future.¹¹⁸ Testifying before the ‘Population Crisis’ hearings, he opposed several other bills earmarking funds for family planning. Gaud, who replaced Bell in 1966, told Senator Gruening that he and the Agency’s mission directors did not regard the Foreign Assistance Program’s ban on financing

¹¹⁵ Ibid. p. 136.

¹¹⁶ Ibid. p. 95.

¹¹⁷ Donaldson (1990), pp. 36-39.

¹¹⁸ Piotrow (1973), pp. 96-97.

contraceptives as impeding their work, and that funds earmarked for population control were excessive and unnecessary.¹¹⁹

USAID also lacked organisational capacity. As one bureaucrat remarked, ‘there is a notable gap between what the President has demanded and what we can do on a working level’.¹²⁰ The Population Branch was part of the Office of Technical Cooperation and Research and had a minuscule budget. ‘Action programmes’ had to be funded by country missions or regional bureaus. These operated independently of the Population Branch, making it difficult to execute a single agenda. Between 1965 and 1966, there was an exodus of USAID personnel who supported population control, and replacements were hard to find, given its reputation as a ‘dumping ground’ for incompetent public health officials.¹²¹

Only in late 1967 did USAID launch a comprehensive programme to support population control in developing countries. In response to a global food crisis, the Population Branch moved to the Office of the War on Hunger, and its staff increased tenfold almost overnight.¹²² Soon after, Congress removed the ban on funding for contraceptives. As funds for population programmes increased each year under Title X of the Foreign Assistance Act, the Population Branch distributed more grants and loans to governments of developing countries, as well as population establishment organisations such as the Ford Foundation, the Pathfinder Fund, and the International Planned Parenthood Foundation.

¹¹⁹ Ibid. p. 138.

¹²⁰ Quoted in *ibid.* p. 128.

¹²¹ Ibid. p. 98.

¹²² Donaldson (1990), p. 77.

4. National Security Study Memorandum 200 (1973-1976)

In the 1970s, the population establishment questioned aspects of the scientific narrative that had shaped their research and advocacy since the mid-fifties. Establishment leaders publicly challenged the deterministic relationship between high fertility and economic advancement, the emphasis of family planning programmes on meeting demographic targets over human welfare, and the segregation of those programmes from other healthcare and development initiatives. Significant changes to the agendas, activities, and staffing of organisations like the Population Council, the Rockefeller Foundation and the Ford Foundation followed.

None of this was reflected in the US government's population policy. In fact, just as key actors in the private sector began to distance themselves from population control, it was advancing up the national security agenda. In 1974, a major National Security Study drew a direct link between population growth in the developing world and America's vital interests. Its comprehensive set of policy recommendations were adopted wholesale by the Ford administration, which embarked on the largest escalation of population assistance since the mid-1960s. I argue that this was due to the activities of a reactionary faction of the population establishment, who were able to conceal their marginal status, monopolise access to decision-makers, and ensure that their scientific narrative carried the day.

Historical background¹²³

Important changes took place within the population establishment in the 1970s, as some of its members began to question both the efficacy and purpose of population control. Although data showed that rates of population growth in developing world had fallen in the 1970s, this

¹²³ This subsection adapts material from my MPhil thesis. Some of the original wording is retained, although modifications have been made. See Young (2016), pp. 85-87.

decline often *preceded* the introduction of national population control programmes.¹²⁴ Some population scientists, caught up in a broader rebellion against modernisation theory in the social sciences, came to see fertility as having a complex relationship with economic development, rather than merely as a barrier to it.¹²⁵ They attacked existing family programmes in developing countries for prioritising demographic targets over maternal welfare and general health, while noting that the ‘supply-side’ approach of maximising the quantity and availability of birth control technology had failed to deliver against those targets.¹²⁶

In the drafting of a World Population Plan of Action for the 1974 World Population Conference in Bucharest, a rift emerged between the population establishment figures advising the UN Population Commission. Hardline proponents of population control, such as Draper and Moore of the Population Crisis Committee (PCC), pushed for a global commitment to reduce fertility to replacement levels by whatever means necessary.¹²⁷ Fearing that this would incite a political backlash from developing nations, others like Bernard Berelson and Frank Notestein insisted on a more sensitive approach. The two sides disagreed over means rather than ends, as the draft Plan still attributed myriad socioeconomic ills to high fertility and population growth, and set hard demographic targets.¹²⁸ This framing was undone by the interstate negotiations to adopt the Plan, when the Group of 77 nations infused the final document with the language of the New International Economic Order. This argued that ‘development was the best contraceptive’ and that the population problems of developing

¹²⁴ See Huessy, ‘The Heritage Foundation Backgrounder: The United Nations’ Flawed Population Policy’, 27 August 1984. Ronald Reagan Presidential Library (hereafter Reagan Presidential Library).

¹²⁵ Merchant (2015), pp. 518-527.

¹²⁶ Critchlow (1999); Connelly (2008); Bashford (2014).

¹²⁷ Merchant (2015), p. 533.

¹²⁸ Ibid. pp. 530-539.

countries were rooted in global structural inequalities, while emphasising ‘planning for population rather than planning of population’.¹²⁹

The Bucharest conference occurred in the midst of fundamental changes to the position and makeup of core population establishment institutions. The year before, the Ford Foundation had announced ‘radical cuts’ to its population programme. The programme’s director, Oscar Harkavy, argued that problems such as ‘age at marriage, status and roles of women, infant mortality, divorce, community structure, reduction and literacy’ deserved research and funding priority.¹³⁰ At the NGO conference that shadowed official developments at Bucharest, Rockefeller delivered a controversial speech that reflected his revised understanding of population issues. Arguing that rapid population growth was a ‘multiplier and intensifier of other problems rather than the cause of them’, he called on governments to ‘place population policy solidly within the context of general economic and social development’, and criticised the focus on numerical targets over improving peoples’ wellbeing.¹³¹

Rockefeller’s speech was heavily influenced by Joan Dunlop, his new aide, who also secured the appointment of George Zeidenstein as the Population Council’s new president in 1975. Zeidenstein diversified the Council’s leadership and conducted an extensive review of its activities. He acknowledged the Council’s achievements in promoting ‘family planning as a central [government] policy response’ to high fertility, but attacked its prioritisation of population control above all else. Echoing Harkavy’s call for a more holistic approach to population issues, he emphasised the relationship between high fertility and ‘inequities in the

¹²⁹ Finkle and Crane (1975), pp. 101-102; Merchant (2015), p. 541.

¹³⁰ Quoted in Critchlow (1999), p. 187.

¹³¹ Quoted in *ibid.* pp. 550-551.

distribution of capital, income and social and economic opportunities, and inadequate realisation of the full potentials of men and women'.¹³² This enraged population establishment stalwarts such as Berelson and Notestein, who resigned. The Council's demographic unit was folded into the Centre for Policy Research under the directorship of Paul Demeny, a longtime critic of orthodox approaches to population.¹³³ In sum, the narrative that prevailed in the National Security Study was at odds with the population establishment's direction of travel.

Performance: backstage

Founded in 1964 by Hugh Moore and William Draper, the PCC brought together academics, politicians, and businessmen 'concerned about the adverse effects of unsustainable population growth on human progress'.¹³⁴ The organisation combined research and advocacy work, and clung to the scientific narrative of the population explosion which had dominated policymaking since the Johnson administration. Its leadership had a steadfast ally in Philander Claxton, the Secretary of State's Special Assistant for Population Matters. As preparations for the 1974 World Population Conference got underway, the PCC lobbied the president and his close advisors for a NSC study on 'population growth as a threat to world peace'.¹³⁵ This, they argued, should 'arouse in us a sense of urgency to forestall them promptly, comparable to that which patriotic citizens in the past have demonstrated in responding to the threat of civil or foreign war'.¹³⁶

¹³² Quoted in *ibid.*

¹³³ Merchant (2015), pp. 545-546.

¹³⁴ Ehlers, 'Letter to Board Members', March 2012. Population Action International. The PCC has been renamed Population Action International.

¹³⁵ Taylor, 'Population Growth as a Threat to World Peace', 2 May 1973. DDRS.

¹³⁶ *Ibid.*

Wary of the PCC's influence over the administration's position on global population, several officials took their concerns to Deputy National Security Advisor Brent Scowcroft.¹³⁷ Charles Cooper, the President's Assistant for International Economic Affairs, went so far as to delay the National Security Study Memorandum (NSSM) for several months. He argued that:

Draper (along with Phil Claxton) belongs to a school of thought about population which has few respectable adherents left. In addition to taking a rather over dramatic view of the problem, Draper, Claxton, et al continue to ride a particular hobbyhorse of a solution, namely that better contraceptives and family planning programmes are the answer. Almost nobody agrees with this anymore...We have been plagued, in AID and elsewhere, with simplistic views of the population problem and simplistic approaches to its solution. A NSSM that reinforced the wrong sets of entrenched attitudes could do much more harm than good.¹³⁸

Others complained that 'a broad NSSM on population is the sort of exercise that involves thousands of man-hours and becomes so unmanageable that decisions never get made'.¹³⁹ Personal connections to key decision-makers enabled the PCC to override these voices of dissent. Draper was a confidant of Nixon's, who felt that he had been 'right on this issue for years', and had appointed him the US's representative to the UNFPA, as well as the Chair of the National Commission for the Observance of World Population Year.¹⁴⁰ In April 1974, Nixon directed an NSC study on the implications of world population growth for US security and overseas interests. The directive itself reflected how the framing of population growth as a national security issue had become entrenched in official discourse: it ordered the study to

¹³⁷ Harold Horan, an NSC staff member, remarked that the PCC 'attributes to over-population world ills that may stem from other phenomena'. See Horan, 'Memorandum for Brent Scowcroft', 10 July 1973. DDRS.

¹³⁸ Cooper, 'Memorandum for General Scowcroft: Population NSSM', 26 November 1973. *FRUS*.

¹³⁹ Bushnell, 'Memorandum for Charles A. Cooper', 1 November 1973. DDRS.

¹⁴⁰ Quoted in Hoff (2012), p. 330, footnote 14.

focus on ‘the international political and economic implications of population growth rather than its ecological, sociological or other aspects’.¹⁴¹

Performance: front stage

Claxton assumed primary responsibility for drafting ‘Implications of Worldwide Population Growth for U.S. Security and Overseas Interests’, enabling him to exercise both directive and dramatic dominance.¹⁴² The report was peppered with tables that projected population growth and fertility levels until 2075 by region and by country. Some quantified an impending catastrophe, showing how, at current rates of growth, there would be 2.5 times as many people on earth in 2000 than in 1970. Others hinted at a brighter future by showing how world population would be reduced if fertility fell to replacement levels. In general, though, the report did not offer new data or projections of population growth, a novel take on the problems that growth posed, or even particularly innovative solutions to these problems. Its main purpose was to systematically present the ways in which rapid population growth in the developing world risked American national security, and propose a comprehensive array of interventions to mitigate those risks.

NSSM 200 attributed continued high fertility rates to three factors: inadequate information about birth control, a lack of motivation to have fewer children, and ‘the slowness of change in family preferences in response to changes in environment’. As with previous performances of expertise, it emphasised how high population growth would impede economic development, ‘sometimes to the point of preventing any increase in per capita income’.¹⁴³ It identified three further ways in which the ‘population explosion’ would lead to an undesirable

¹⁴¹ Kissinger, ‘National Security Study Memorandum 200’, 24 April 1974. *FRUS*.

¹⁴² Green (1993), p. 310. This was based on the author’s conversation with Claxton. See *ibid.* p. 319, footnote 37.

¹⁴³ *Ibid.* pp. 6-7.

future for the US. First, it would place immense strain on global food supplies. As most developing countries had utilised all available agricultural land, and could not afford to import more food, food production could only increase by generating higher yields. This was impeded by a lack of capital and foreign exchange for intensive agriculture, as well as the rising cost of energy and fertiliser. This raised the prospect of massive famines in the medium term; in the long-term, rapid population growth risked environmental degradation through deforestation and soil erosion.¹⁴⁴

Second, it would jeopardise exports of minerals needed for industrial production in developed countries like the United States: 'if rapid population growth frustrates [developing countries'] prospects for economic development and social progress, the resulting instability may undermine the conditions for expanded output and sustained flows of such resources'.¹⁴⁵ These countries would also find it increasingly difficult to pay for raw materials, energy supplies, and fertiliser. The US would have to pay more for imports while its foreign aid expenditure would rise.¹⁴⁶

Third, rapid population growth would contribute to urban degeneration, political unrest, and violent conflict, destabilising governments and making them vulnerable to foreign intervention or extremist insurrection. It would accelerate rural to urban migration, placing immense strain on government services like sanitation and policing. Social upheaval would ensue: 'organised brigandry, food riots, separatist movements, communal massacres'.¹⁴⁷ These developing countries would become less attractive as destinations for foreign capital,

¹⁴⁴ Ibid. p. 5.

¹⁴⁵ Ibid.

¹⁴⁶ Ibid.

¹⁴⁷ Ibid. p. 8.

further hampering prospects for economic advancement.¹⁴⁸ The report also claimed that population pressures often lay at the root of violent conflict, citing the 1969 El Salvador-Honduras War and the 1970-1971 Bangladesh Liberation War as examples.¹⁴⁹

Overall, NSSM 200 concluded, high population growth in developing countries damaged the 'internal stability and international relations of countries in whose advancement the U.S. is interested, thus creating...national security problems for the U.S...there is a major risk of severe damage to world economic, political and ecological systems'.¹⁵⁰ It was therefore incumbent upon policymakers to mitigate this by helping developing countries achieve a 'replacement' level of fertility (two children per household) by the year 2000.¹⁵¹ That way, 'the present 2 percent growth rate [would] decline to 1.7 percent within a decade, and to 1.1 percent by 2000', resulting in '500 million fewer people in 2000 and about 3 billion fewer in 2050'.¹⁵² This required developing countries to 'greatly intensify' their population control programmes. The study recommended that the US adopt 'a comprehensive strategy with both bilateral and multilateral elements' to facilitate this, coordinated by NSC Under Secretaries Committee. It identified thirteen 'priority' countries where 'the imbalance between growing numbers and development potential most seriously risks instability, unrest, and international tensions', including India, Mexico, and Indonesia, which together accounted for 47 percent of the world's population increase between 1970 and 1975. Key interventions included the expansion of USAID's population assistance activities, a diplomatic campaign to garner support for population control among leaders in developing

¹⁴⁸ Ibid.

¹⁴⁹ Ibid. Chapter 5.

¹⁵⁰ Ibid. p. 8.

¹⁵¹ Ibid. p. 10.

¹⁵² Ibid.

countries, increased financial support for population assistance undertaken by multilateral and private organisations, further research into birth control technology, and a propaganda effort to reach developing world citizens directly via radio, printed material, and satellite broadcast.¹⁵³

Political effects

The principle effect of NSSM 200 was to encourage decision-makers at the highest level of government to adopt an integrated approach to managing the risks of rapid population growth. Nixon resigned shortly after authorising the study, so the decision to approve its recommendations fell to Gerald Ford, who did so with only minor adjustments as National Security Decision Memorandum (NSDM) 314. The NSC Undersecretaries Committee, chaired by the Deputy Secretary of State, would oversee US population policy.¹⁵⁴ The Committee then created an Interagency Task Force on Population Policy to monitor the implementation of population policy and coordinate the activities of seventeen government departments and agencies.¹⁵⁵ This arrangement, as well as the memorandum itself, was renewed by President Carter, providing a remarkable degree of policy continuity across two otherwise very different administrations.¹⁵⁶

Three factors eased the translation of Claxton and the PCC's scientific narrative into political practice.¹⁵⁷ Both NSSM 200 and NSDM 314 were strictly classified, so potential opponents

¹⁵³ Ibid. pp. 73-105.

¹⁵⁴ Scowcroft, 'National Security Decision Memorandum 314', 26 November 1975. Gerald R. Ford Presidential Library.

¹⁵⁵ Green (1993), p. 311.

¹⁵⁶ Vance, 'Reaffirmation of U.S. International Population Policy', 6 March 1977; Tarnoff, 'Retention of Interagency Task Force on International Population Policy', 16 April 1977. Both in *FRUS*.

¹⁵⁷ This paragraph adapts material from my MPhil thesis. Some of the original wording is retained, although modifications have been made. See Young (2016), pp. 91-92.

of its arguments or policy recommendations were unaware of its existence. Additionally, many of the diplomatic initiatives NSDM 200 proposed could be implemented by the White House and the State Department without the cooperation of other branches of government. Under Nixon and Ford, Henry Kissinger acted as both Secretary of State and the National Security Advisor, meaning the State Department and the National Security Council were usually aligned. Finally, the report assigned great importance to USAID in delivering US population policy in individual countries. The director of its Population Office, Reimart Ravenholt, agreed vehemently with the PCC's views on controlling population growth. Under his leadership, USAID was transformed into a population assistance 'juggernaut'.¹⁵⁸ He controlled an enormous budget, and the 1972 consolidation of the Agency's population activities into a single unit gave him direct authority over population officers stationed in developing countries.¹⁵⁹ Such was his enthusiasm that he repeatedly breached restrictions on the use of federal funds to finance or encourage abortion and sterilisation as family planning methods. Throughout his tenure, he surreptitiously financed incentive payments for mass sterilisation programmes and smuggled abortion kits and contraceptives to developing countries.¹⁶⁰

The Task Force's annual reports to the President from 1976 to 1979 preserved the scientific narrative expressed in NSSM 200. Any proposed changes were to escalate or extend its original recommendations. In June 1976, the Task Force recommended augmenting USAID population programmes with three 'discreet' measures: encouraging national leaders to give vocal support to population control; 'rooting' village-level family planning programmes by

¹⁵⁸ Connelly (2008), pp. 240-242.

¹⁵⁹ Donaldson (1990), pp. 79-80.

¹⁶⁰ Connelly (2008), pp. 306-323.

linking them to the community's economic outlook, thus creating 'peer pressure' for limiting family size; and training trusted paramedics and midwives to provide 'personalised' family planning advice to women before they became mothers and immediately after birth, offering sterilisation after the desired family size had been reached.¹⁶¹ The scientific narrative of NSSM 200 also framed the Task Force's internal discussions. Participants occasionally disagreed over how best to implement the study's recommendations, but did not question their rationale.¹⁶²

5. The Mexico City Policy (1983-1984)

This final episode demonstrates how experts and their collaborators can be excluded from the policymaking process, even when the scientific narrative they propagate is deeply embedded in state institutions and practice.

For most of Reagan's first term, his speeches and his administration's actions mirrored the scientific narrative purveyed by figures such as Draper and Claxton. The CIA churned out reports warning how high population growth could exacerbate socioeconomic malaise and political tensions in places like Bangladesh, Pakistan and Lebanon.¹⁶³ The State Department and USAID blamed myriad problems in developing countries on rapid population growth, and maintained that lasting progress 'could only be made when family planning and

¹⁶¹ NSC Undersecretaries Committee, 'First Annual Report on US International Population Policy', 8 June 1976. DDRS.

¹⁶² See Interagency Task Force on Population Policy, 'First Meeting', 15 December 1975; Interagency Task Force on Population Policy, 'Fourth Meeting', 23 April 1976; Interagency Task Force on Population Policy, 'Seventh Meeting', 28 June 1976. All in DDRS.

¹⁶³ For example, National Foreign Assessment Centre, 'Population Growth and Sociopolitical Tensions: Five Case Studies', 1 September 1981; Directorate of Intelligence, 'Bangladesh: Implications of Explosive Population Growth', 1 December 1983; Directorate of Intelligence, 'Middle East-South Asia: Population Problems and Political Stability', 1 February 1984. All in DDRS.

population programmes are an integral element of national development efforts'.¹⁶⁴ With the executive's support, Congress continued to appropriate more funds for USAID's population assistance activities, and USAID continued to lean on governments of developing countries to adopt aggressive measures to curb population growth.¹⁶⁵

As Reagan sought reelection, he abandoned the scientific narrative which had underpinned US population policy for nearly two decades. At the UN's International Conference on Population in Mexico City in 1984, the American delegation proclaimed that there was 'no global population crisis' justifying 'drastic forms of intervention by governments'.¹⁶⁶ This was swiftly followed by an executive order terminating federal funding for any NGOs that performed or promoted abortions, and for any country that used coercive measures to control fertility. At first glance, this abrupt change is consistent with the emergence of new scientific narratives about global population. However, I argue that it had little to do with the activities of the population establishment, and was, instead, driven by the anti-abortion coalition in the United States: an alliance of anti-abortion groups, conservative politicians of the New Right, and the Christian Right. By threatening Reagan's reelection prospects, this coalition was able

¹⁶⁴ Hill, 'Memorandum From the Executive Secretary of the Department of State (Hill) to the President's Assistant for National Security Affairs (Clark)', 28 March 1983. *FRUS*. A widely-circulated telegram from the Department of State stated that 'Concomitant with population growth are food scarcities and increasing malnutrition, depletion of natural resources and degradation of the productive environment, growing unemployment and underemployment, urban crowding and severe housing shortages, and the diversion of resources from investment to support the growing population'. 'Telegram from the Department of State to AID Missions Worldwide, the Mission to the United Nations, and the Embassies in Nigeria and France', 19 June 1981. *FRUS*.

¹⁶⁵ In a letter to Silvio Conte, a member of the House Appropriations Committee, Assistant to the President for Legislative Affairs Kenneth Duberstein said: 'The Administration is concerned about the problems which rapid population growth create for developing countries seeking to attain social and economic progress...We appreciate Congressional interest in international population activities and look forward to continuing to work closely with Congress in our deliberations on budget matters'. Duberstein, 'Letter to Silvio O. Conte', 17 February 1983. Reagan Presidential Library.

¹⁶⁶ The White House Office of Policy Development (1984).

to deny population establishment members the opportunity to influence the American position in Mexico City.

Anti-abortion groups spent the late 1970s and early 1980s campaigning to overturn the Supreme Court's ruling in *Roe v. Wade* and restrict federal funding for abortions.¹⁶⁷ Reagan courted this movement during the 1980 elections, but distanced himself once in office, preferring to focus on 'budget reduction, deregulation, and tax cuts'.¹⁶⁸ As a second term drew near, he bolstered his anti-abortion credentials by pledging support for two legislative initiatives: the Human Life Bill, which would extend constitutional protection to unborn children by recognising them as human beings, and the Respect Human Life Act, which would prohibit federal government involvement in performing abortions. He also published *Abortion and the Conscience of the Nation*, an elegant disquisition on 'the sanctity of human life in the unborn', which drew parallels between the anti-abortion movement and eighteenth century abolitionists.¹⁶⁹

Around this time, several organisations that provided population assistance were implicated in the coercive measures adopted by some developing countries to control population growth. In particular, China's one-child policy became 'an easy shorthand for pro-lifers to convey their broader concerns about US foreign aid'.¹⁷⁰ The UNFPA and the IPPF had supported the one-child policy, lavishing praise on Chinese leadership and offering technical assistance and training to local health officials. As Connelly writes, the staff at these organisations 'had their eyes wide open': they were fully aware that the one-child policy employed ethically

¹⁶⁷ Flowers (2019).

¹⁶⁸ Critchlow (1999), p. 211.

¹⁶⁹ McAndrew (2014), p. 236.

¹⁷⁰ Flowers (2019), p. 93.

dubious tactics — a dizzying array of surveillance methods, fines, punishments, and inducements — especially in rural areas.¹⁷¹ Women were often forced to have IUDs implanted, undergo abortions, or be sterilised.¹⁷² But the scale and success of China's population control programme meant that they were generally willing to overlook the programme's human rights abuses until 1983, when the American media began to report on them. The IPPF and the UNFPA were castigated for sanctioning coercion in order to achieve demographic targets; the US government, as a major donor to both organisations, was guilty by association.¹⁷³ Amid the public outcry, USAID was linked to the El Salvadorian government's mass sterilisation campaign, just as the Kissinger Commission on Population and Development in Latin America endorsed the continuation of the Agency's family planning and population control programmes.¹⁷⁴

These events gave the US anti-abortion movement powerful ammunition at a time when Reagan regarded their support — particularly those of the Christian Right — as crucial to his election victory.¹⁷⁵ In January 1984, its leaders handed Reagan a 'pro-life briefing book'.¹⁷⁶ Their demands included the removal of population assistance from the Kissinger Commission's aid package to Latin America, and the appointment of an anti-abortion delegation to the Mexico City Conference.¹⁷⁷ The State Department, which had been leading preparations for the conference, planned for the delegation to be led by Richard Benedick, the Coordinator for Population Affairs and 'an outspoken advocate of family planning

¹⁷¹ Connelly (2008), p. 343.

¹⁷² Ibid.

¹⁷³ See *ibid.* pp. 339-351.

¹⁷⁴ Kissinger (1984).

¹⁷⁵ Pierard (1985); Flowers (2019), pp. 99-102.

¹⁷⁶ Evans and Novak, 'U.S.-Sponsored Sterilizations', 22 February 1984. *Washington Post*.

¹⁷⁷ Ibid.

programmes'.¹⁷⁸ Following negotiations with anti-abortion leaders, the White House sidelined him in favour of Senator James Buckley, and brought conference preparations in-house to the Office for Policy Development.¹⁷⁹

A decade earlier, Buckley had joined forces with anti-abortion groups to propose a constitutional amendment prohibiting all abortions except to save the life of the mother.¹⁸⁰ His Catholicism enhanced his appeal to the White House: a strategy paper for the reelection campaign described abortion as 'the number one reason for the Catholic crossover [to the Republican Party]...obviously, we must continue to support the Catholic position on this issue'.¹⁸¹ As the favoured candidate of a coalition whose support Reagan deemed vital, Buckley wielded immense power. He agreed to chair the delegation so long as 'the policy position would be consistent with his personal convictions', and the final draft of the position paper carried his preferred wording.¹⁸² He also insisted that those with 'serious reservations about the fundamental merits' of the new US position be excluded from participation.¹⁸³ The White House surrendered to these demands, and the delegation dispatched to Mexico had no population experts, and no Benedick.¹⁸⁴

The position paper for the Mexico City Conference was prepared by Carl Anderson, a conservative staffer at the Office for Policy Development. There was minimal input from

¹⁷⁸ Finkle and Crane (1985), p. 16.

¹⁷⁹ Svahn, 'Memorandum for Carl A. Anderson', 29 May 1984. Reagan Presidential Library. In this memorandum, Svahn asked Anderson to serve as coordinator for the conference and tasked him with preparing the position paper.

¹⁸⁰ 'Buckley Pushes Curb on Abortion', 1 June 1973. *NYT*.

¹⁸¹ Reilly, 'General Plan of Appeal to Catholics', n.d. Reagan Presidential Library.

¹⁸² Finkle and Crane (1985), p. 17; Buckley, 'Letter to James A. Baker', 12 July 1984. Reagan Presidential Library.

¹⁸³ Buckley, 'Letter to Mrs. Becky Norton Dunlop, Office of Presidential Personnel', 7 May 1984. Reagan Presidential Library.

¹⁸⁴ *Ibid.* See also Anderson, 'Memorandum for John A. Svahn: Presidential Message for International Conference on Population', 16 May 1984. Reagan Presidential Library.

other government departments and no consultation of population scientists. In an attempt to undermine the White House, the State Department leaked Anderson's draft to the press.¹⁸⁵ This triggered a deluge of editorials, letters, and advertising campaigns, as well as protests from USAID, the State Department, and the House Committee on Foreign Affairs, who argued that the position paper 'undercut long-term U.S. foreign policy interests'.¹⁸⁶ The Population Association of America submitted a lengthy rebuttal of the statement to Congress, calling it a distortion of 'five decades of scientific evidence'.¹⁸⁷

This furore had a negligible effect on the policy statement delivered in Mexico City. The document rejected most aspects of the scientific narrative of the population explosion, retaining only demographic transition theory to explain why developing countries had experienced a population boom.¹⁸⁸ This boom was now described as 'a neutral phenomenon': 'more people do not necessarily mean less growth'. The so-called global population crisis was in fact an 'overreaction' provoked by two factors. The first was the 'economic statism' practiced by governments in developing countries, which had throttled growth and disrupted the 'natural' decline of birth rates as standards of living rose. The second was 'an outbreak of anti-intellectualism' in the West, 'which attacked science, technology, and the very concept of material progress'.¹⁸⁹ Reagan's accompanying message to the conference, also crafted by Anderson, declared that concerns over demographic change were 'inseparable from a

¹⁸⁵ Svahn, 'Memorandum to Ed Meese (handwritten note)', 30 August 1984. Reagan Presidential Library.

¹⁸⁶ Broomfield and Fascell, 'Letter to Robert C. McFarlane', 28 June 1984; McPherson, 'Memorandum for Robert McFarlane and Jack A. Svahn', 13 June 1984. Both in Reagan Presidential Library.

¹⁸⁷ Teitelbaum, 'Statement of Michael S. Teitelbaum, Ph.D. at Congressional Briefing on White House Population Position Paper', 27 June 1984. Reagan Presidential Library.

¹⁸⁸ The alternative position papers put forward by State and USAID were also published in the Congressional Record and debated. Their contents was largely omitted from the final statement. See 'Congressional Record', 18 June 1984. Reagan Presidential Library.

¹⁸⁹ The White House Office for Policy Development (1984), p. 577.

concern for the welfare of children — who are the ultimate resource of any society’.¹⁹⁰ This was a far cry from the view of children that had informed American population assistance for the past two decades: that their greatest contribution to society came from not being born in the first place.

This *volte-face* came to be known as the Mexico City Policy. It angered the other conference attendees, though most were aware that the American position reflected Reagan’s electoral concerns.¹⁹¹ It had little impact on the declaration adopted at the conference, but heralded far-reaching changes to US population policy. The 1974 Helms Amendment to the Foreign Assistance Act already prohibited NGOs that received federal funds from using them to finance abortions as a method of family planning, or to induce women to undergo abortions.¹⁹² At Buckley’s insistence, the Mexico City Policy extended this to withhold funding from any NGO that performed or promoted abortions as a method of family planning in other countries, even if it did not use federal funds to do so.¹⁹³ A wide range of activities met this criteria, including providing information on abortions, counselling services, and lobbying foreign governments.¹⁹⁴ Shortly afterwards, the US stopped funding two of the most important organisations involved in the global governance of population, the UNFPA and the IPPF. It also required aid contributions to countries that offered abortions to be kept in

¹⁹⁰ Anderson, ‘Memorandum for John A. Svahn: Presidential Message for International Conference on Population’, 16 May 1984. Reagan Presidential Library.

¹⁹¹ Finkle and Crane (1985), p. 15.

¹⁹² Blanchfield (2020).

¹⁹³ The White House Office for Policy Development (1984). Buckley was responsible for inserting the following critical statements into the position paper: ‘The U.S. will also call for concrete assurances that the UNFPA is not engaged in, or does not provide funding for, abortion or coercive family planning programmes’ and ‘the U.S. will not provide family planning funds to any nation which engages in coercion to achieve population growth objectives’. See Buckley, ‘Letter to James A. Baker’, 12 July 1984. Ronald Reagan Library. In this letter, Buckley implies that his willingness to head the Mexico City delegation is conditional on the inclusion of the above statements.

¹⁹⁴ Blanchfield (2020).

segregated accounts, and withdrew family planning funds from ‘which engage in forcible promotions to achieve population growth objectives’.¹⁹⁵

6. Alternative theories

Epistemic community theory and persuasion

The population establishment met the criteria for an epistemic community. Their members shared principled and causal beliefs, standards for validating knowledge, and a common policy enterprise. Given the unprecedented increase in world population, they also satisfied a key scope condition of epistemic community influence: uncertainty. However, in each of the episodes studied in this chapter, they acted in ways that confound the epistemic community framework. In addition, supposed learning by decision-makers from the epistemic community did not produce an immediate or direct change in state behaviour, as Haas’s theory would predict.

The sequence of events leading up to the Draper Committee’s recommendations on how the US should tackle ‘the population explosion’ deviate from the predictions of epistemic community theory. Neither Hugh Moore nor Robert Cook behaved in a way that was consistent with communicative action. Moore leveraged his social capital to induce General Draper to consider population issues, and to ensure that Cook was appointed as the Committee’s only population consultant. Cook then misrepresented the conclusions of a single study as empirical evidence of the negative relationship between population growth and economic development. President Eisenhower’s private acceptance, but public rejection, of the Draper report’s recommendations on population is also anomalous for epistemic

¹⁹⁵ The White House Office for Policy Development (1984), p. 578.

community theory. The theory holds that scientific consensus produces political consensus, and does not account for the possibility that other domestic political factors can interrupt or impede the implementation of experts' policy recommendations.

President Johnson's support for population assistance from 1965 onwards appears to exemplify a decision-maker being persuaded by an epistemic community member. The process by which this occurred, however, refutes the theory's account of how experts and policymakers interact. Enke's work did not represent the consensus of the scientific community at the time — the paper given to Johnson had not even passed peer review. Rather, Komer selected Enke's work because it reinforced the broader narrative of the population explosion with a compelling argument about how investing in population control was a more efficient use of foreign aid. Furthermore, the translation of this scientific narrative into political practice was complicated by continued resistance from the Catholic Church and bureaucratic inertia at USAID.

Scientific consensus changed during the Nixon-Ford administration, yet this was not reflected in the US government's population policy. Epistemic community theory would lead us to expect Draper and Claxton to solicit the opinions of their peers at organisations like the Population Council, and incorporate these perspectives into the NSC study. We would also expect them to revise their policy recommendations in light of new research on the relationship between demographic and socioeconomic variables. Instead, they tightly controlled the flow of information to key policymakers, suppressing viewpoints that diverged from theirs. This way, they ensured that the original scientific narrative of the population explosion influenced executive decision-making.

Finally, during the Reagan administration, the US government's stance on population assistance unexpectedly reversed. This cannot be attributed to the activities of the epistemic

community, but rather to the abortion debate that consumed American domestic politics as Reagan sought reelection. The epistemic community framework holds that recognised competence in a particular issue-area is sufficient to grant experts access to decision-makers. In this case, the anti-abortion coalition was able to exclude the population establishment from the process of formulating the American position at the Mexico City Conference, hence foreclosing any possibility of communicative action. They achieved this by raising the costs of non-compliance with their agenda at a time where Reagan was especially sensitive to those costs.

Securitisation theory and threatening

The strategic use of language by the advocates of population control is broadly consistent with Bentley Allan's model of expert behaviour. Their conviction that the population explosion could be curtailed through birth control was arguably grounded in a cosmological narrative about humankind's mastery over nature using technology. Representations of 'the population problem' in the fifties and sixties typically reduced citizens of developing countries to features of the natural environment: creatures of habit who would impulsively procreate until the state intervened.¹⁹⁶ Without access to birth control, women could not help but have more children, and without state guidance and education, they would remain ignorant of the benefits of smaller families. However, this depiction of reproductive behaviour in developing countries is hard to square with Allan's proposition that experts place issues on states' agendas by framing them as a direct cause of harm to a valued referent object. The population explosion did not endanger American national security in and of itself. Rather, it was thought to increase the likelihood that economies would stagnate, food supplies would run out, and civil unrest

¹⁹⁶ An interesting point of departure raised by Allan's work is the extent to which racism forms part of various scientific cosmologies.

would erupt. The resulting international environment would jeopardise America's fundamental interests. High fertility was *risky*, not threatening.

There is also little evidence in this chapter for the claim that experts exert agenda-setting power by selectively highlighting uncertainty. The significance of population growth for US national security was mediated by other factors. To get policymakers to act on population, individuals such as Robert Cook and Robert Komer exaggerated the strength of the causal relationship between population growth and those factors, especially economic development. Allan's theory leads us to expect differently: that they would emphasise the uncertain consequences of the population explosion.

The artefacts that Cook and Komer used in their performances — the Coale-Hoover study and Enke's work on prevented births — were techniques of prospection: exercises in speculation, not observation. Coale and Hoover first conjured, then compared, future versions of India and Mexico in order to make modest conjectures about the impact of high fertility on gross domestic product. Cook's performance created the impression that these projections were both highly likely to eventuate and typical of all developing countries. Enke, meanwhile, estimated the amount of money that did not need to be spent by counting the number of births that did not have to happen. His narrative of prevented births was created 'through a thick matrix of speculative and counterfactual measures'; accepting his argument meant accepting a host of questionable assumptions about economic life, individual choice, and biological mechanisms.¹⁹⁷ Even Enke himself admitted that his work 'could be wrong by a factor of two'.¹⁹⁸ Despite this, it was incorporated into Komer's performance as a definitive demonstration of the efficacy of supporting population control programmes over other forms

¹⁹⁷ Murphy (2017), p. 49.

¹⁹⁸ Enke, 'Lower Birth Rates — Some Economic Aspects', 12 February 1965. Johnson Presidential Library.

of foreign assistance. Where experts did strategically inflate uncertainty, it was to question the viability of alternative interventions to address the risks they identified. For example, in NSSM 200, Phil Claxton cast doubt over whether food production could keep up with population growth.

7. Conclusion

During the twentieth century, the rationalities of population that informed regimes of political practice changed repeatedly. Initially, politicians thought of population as a source of national power: in America, the state intervened with compulsory sterilisation programmes to breed out undesirable elements of the population. After World War II, high fertility was viewed as a key cause of economic stagnation overseas, which could be corrected through national population control programmes. Then, just as the US government renewed its global commitment to population control in the mid-1970s, and countries like Bangladesh, India, and China intensified their programmes to lower fertility, a discourse of population centred on reproductive rights and health emerged from, and provided a focal point for, a nascent transnational women's movement. This movement criticised the coercive practices that accompanying the dissemination of birth control technology in developing countries, and attacked Western governments, private foundations, and IGOs for endorsing those practices. Its members reframed birth control technology as a way for women to protect their health and assert autonomy over their bodies.¹⁹⁹ Since the 1990s, this alternative positioning has been embraced by the organisations that were once pivotal to population control, and fused with what Rose would call an 'advanced' liberal rationality, which encourages individuals to

¹⁹⁹ See Hartmann (1987); Eager (2014).

self-regulate.²⁰⁰ Accordingly, USAID and UNFPA now justify their family planning programmes as empowering women to manage and optimise their own health.

This chapter scrutinised the formative period when national populations in the Third World were scaled into objects of global governance. Methods of extrapolating a country's vital statistics from limited data transformed national populations into comparable units, while demographic transition theory set out the trajectory along which they moved, enabling Western commentators to declare that a 'population explosion' was engulfing the developing world. Because the high population growth of individual countries was thought to share a cause, it was believed that they could be solved in the same way. While the American state was not the only actor invested in these solutions, its financial, technological, and diplomatic commitment to population control was unmatched, and anchored the larger global movement to govern global population. This commitment, I argued, only came about due to performances of expertise which identified the population explosion as a national security risk.

Like the previous chapter, the events studied in this one undermine depictions of America's efforts to 'develop' Third World countries during the Cold War as an extension of its drive to defeat Communism. Population assistance embodied a rationality of risk management, not threat mitigation: no single choice to reproduce was dangerous, but millions of such choices could foster the conditions for widespread socioeconomic upheaval that would ultimately compromise American national security. While policymakers worried that the Soviet Union could capitalise on this upheaval to expand its sphere of influence, the national security risks of the population explosion often proved sufficiently compelling on their own. Neither Enke's

²⁰⁰ See Rose (1999), Chapter 4. On neoliberal reproductive governance, see Morgan and Roberts (2012); Rinker (2015).

original paper on prevented births nor Komer's repackaging of Enke's material explicitly mentioned the Soviet threat. The same was true of NSSM 200, which was arguably the deepest exposition of the scientific narrative of the population explosion. The extent to which this scientific narrative permeated the American political establishment from 1965 to approximately 1985 is extraordinary, given the dearth of empirical evidence to support the claim that population growth impeded economic development. In large part, this was an accomplishment of adept stage management by performers of expertise who successfully kept conflicting views and inadequate data hidden from their audiences. This demonstrates how so-called 'scientific' policy can depart significantly from our idealised conceptions of scientific inquiry.

Unlike the modernisation theorists based at CENIS, the performers of expertise discussed in this chapter did not proactively engage in boundary maintenance. This is probably because many of the performances of expertise that proved pivotal in shaping foreign policy were delivered by people who were not themselves professional scientists. Enke's theory of 'prevented births' was used as an artefact by Komer to convince President Johnson to begin population assistance, just as Cook drew on demographic transition theory to influence the Draper Committee's work. For scientists who participate in politics, overt acts of boundary maintenance, such as reminding audiences that their advice is 'purely technical', is a way of insuring their cultural capital. By comparison, knowledge brokers like Komer, a bureaucrat, and Cook, who headed a non-profit organisation, could leverage work that bore the stamp of scientific authority without having to conform to the more rigid role expectations of a scientist. Because a substantialist approach like epistemic community theory begins by searching for people who possess the attributes of 'experts', it overlooks the contributions of knowledge brokers to the overall spectacle of expertise, and their instrumental role in translating a scientific narrative into political practice.

Perhaps, above all, this case foregrounds the extent to which domestic politics can interrupt and impede the projection of American state power. For most of the Cold War, the US's governance of global population was shaped by the struggle between scientific advocates of population control and the Catholic Church, followed by the anti-abortion movement. Key decision-makers in government accepted the scientific narrative of the population explosion relatively early on. However, their willingness to act on that narrative depended on whether they expected electoral and political costs from other interest groups. The translation of a scientific narrative into a regime of practice was thus complicated enormously by domestic political factors.

This case also shows that competitions for authority need not be between commensurate groups, that is, between opposing groups of experts. The intervention favoured by the population establishment happened to be a set of practices and technologies that other groups in society claimed moral authority over. Abortion was, and is, only one birth control technology promoted by the assemblage of governments, IGOs and NGOs involved in governing global population. But, because abortion is entangled in the regimes of practice that accompany America's efforts at governing global population, those efforts have become captive to partisan politics: every Democratic president since Reagan has rescinded the Mexico City Policy, and every Republican president has restored it, typically within a few days of taking office.

6. Nuclear scientists and the nuclear testing debates

The Partial Test Ban Treaty was signed in August 1963 by the Soviet Union, the United States, and the United Kingdom.¹ It prohibited nuclear weapons tests in the atmosphere, outer space, and underwater, but not underground. The product of lengthy negotiations, it was the first arms control treaty of the nuclear age. The treaty's American architects intended for it to address growing public unease about radioactive fallout, nuclear weapons proliferation, and the arms race between the superpowers. Yet this long sought after, hard-won agreement eventually came 'into the world like an unwanted child', as one *New York Times* editorial put it: '[e]ven those who favour it and believe in it seem to be doing everything they can in Senate committees and public statements to persuade the American people that it really doesn't mean much'.²

The PTBT was a setback for those who wanted unrestricted testing, but also disappointed its supporters, who would have preferred a comprehensive test ban. Paradoxically, it accelerated the arms race: the Senate conditioned ratification of the treaty on an expanded programme of nuclear weapons development, including increased underground testing, in order to 'safeguard' against potential Soviet deception. This chapter considers the test ban debates in America that led up to this perverse outcome. It looks at how performances of expertise for and against a test ban shaped the Eisenhower administration's approach to nuclear testing,

¹ The full name of the PTBT is the Treaty Banning Nuclear Weapons Tests in the Atmosphere, in Outer Space and Under Water. It is also known as the Limited Test Ban Treaty.

² 'War and Peace', 23 August 1963. *NYT*.

its willingness to limit testing, and then the ratification of the PTBT during the Kennedy administration.

Attempts to restrict the collateral damage caused by weapons predates the nuclear era. A primary motivation for the 1925 Geneva Protocol was the large number of civilian casualties during World War I caused by noxious gases spreading beyond the battlefield. But the purpose of the Protocol was to define humane conduct in war, not manage the general risk of chemical and biological weapons.³ With nuclear bombs came the understanding that the instruments which states used to meet external threats — either through direct attack or as a deterrent — could themselves pose a risk to national security. This risk was not restricted to their actual use, but also their development.

The nuclear testing debates show how discourses of danger and threat and danger as risk come together to shape foreign policy and definitions of national security. The principle objective of the PTBT was ‘the speediest possible achievement of an agreement on general and complete disarmament’, but it also aimed to ‘end the contamination of man’s environment by radioactive substances’.⁴ This has led some scholars to characterise nuclear testing as the first global environmental issue.⁵ I think this is misleading. The rationale for restricting nuclear testing was not environmental protection. Instead, managing the environment was a way of optimising the conditions under which human life could flourish. Outside of the immediate blast zone, radioactive fallout endangered humanity by contaminating the air people breathed in, the water they drank, and the food they ate, causing

³ As Bunn reminds us, the Protocol ‘does not prohibit research, development, testing, production or stockpiling of gas or germ weapons. It does not prohibit the use of such weapons in reprisal against their first use by the enemy. It does not prohibit the domestic use of tear gases or herbicides’. Bunn (1970), p. 255.

⁴ ‘Treaty banning nuclear weapon tests in the atmosphere, in outer space and under water’, 5 August 1963. United Nations Treaty Series.

⁵ McCormick (1989); Higuchi (2020), p. 2.

DNA damage and inheritable genetic mutations. In the long run, it did not matter where nuclear tests were conducted, as research into the dispersal of radioactive particles showed how they could travel across immense distances and accumulate over time.⁶

I therefore suggest that we regard nuclear testing as the first global *biospheric* issue.⁷ The nuclear testing debates reinforced and politicised an emergent understanding of the planet as a single, integrated whole, in which the fate of humanity, other lifeforms, and their habitats were inextricably intertwined. The scientific narrative of nuclear fallout claimed that continued testing would cause widespread, long-lasting harm to the biosphere, even if nuclear weapons were never used again. Fallout jeopardised US national security: even if tests were conducted in remote locations, the inescapable interconnectivity of Earth's many ecosystems meant that radioactivity would eventually harm Americans.⁸ This risk could be managed if the nuclear powers restricted testing. Ideally, this would be through a comprehensive test ban treaty. Less preferable, but better than nothing, was a partial test ban treaty, which restricted testing to certain environs.

Like population assistance and development assistance, the PTBT reflected a positive and pastoral approach to achieving national security: a matter of governing global objects 'at a distance'.⁹ With nuclear testing, however, managing risks and mitigating threats initially appeared incompatible. Advocates for population assistance and development assistance could build into their narratives the claim that those interventions would foster societies

⁶ See Bruno (2003).

⁷ The biosphere is defined as 'a global ecosystem composed of living organisms (biota) and the abiotic (nonliving) factors from which they derive energy and nutrients'. Encyclopedia Britannica (2020).

⁸ There were two major sites for American nuclear tests conducted between 1945 and 1963: the Nevada Test Site in Nye County, Nevada, and the Pacific Proving Grounds (various locations across the Marshall Islands, Christmas Island, and Johnston Atoll).

⁹ Rose and Miller (1992), p. 173.

naturally immune to Soviet influence. Managing the risks of overpopulation and underdevelopment would, in the long run, would make the USSR less threatening by weakening its ideological appeal. By contrast, managing the risk of fallout compromised America's ability to deter the Soviet threat by constraining its nuclear weapons development programme. Moreover, the discourse of danger that constructed the USSR as a threat limited the policy options available to manage fallout. Any restriction on testing had to be mutually agreed with the Soviet Union, any agreement could not militarily disadvantage the US, and had to be enforced by a robust monitoring system, so as to deter clandestine violations by an untrustworthy adversary.

Nuclear testing could be framed as national security risk, or as a key element in defence preparation against a national security threat. The latter view was complicated by a growing awareness among policymakers of two facts. First, that the very development of nuclear weapons escalated hostilities between the superpowers by provoking an arms race. Second, that America's defence could not pivot on using thermonuclear weapons in 'massive retaliation' against the Soviet Union when it was capable of responding in kind, for the ensuing war would destroy both sides.¹⁰ This led to an increasing interest in pursuing arms control as a route to national security. Performers of expertise had to navigate this complex terrain. Nuclear scientists were uniquely empowered to do so because they claimed epistemic authority on the basis of their training in the natural scientists *and* the application of this training to nuclear weapons development. As scientific experts, they could debate how fallout impacted the biosphere; as defence experts, they could compare America's nuclear capabilities to the Soviet Union's. In contrast, geneticists, who also participated in the nuclear testing debates, could only speak as scientific experts. Regardless of whether they spoke as

¹⁰ Craig (1998).

defence experts or as scientific experts, nuclear scientists had to maintain the impression that they were offering impartial, objective advice.

Developing the weapons technology which ended World War II accorded nuclear scientists unparalleled prestige and a prominent role in postwar public life.¹¹ Furthermore, the continued importance of nuclear weapons to American primacy guaranteed ongoing federal support for their work and frequent opportunities to interact with senior officials. Almost all the nuclear scientists who appear in this chapter worked on the Manhattan Project, then held positions at one of the major national nuclear weapons laboratories in Los Alamos, New Mexico, and Livermore, California.¹² The issue of nuclear testing opened up a ugly, public schism within this tightly-knit community. Whereas the population establishment had to contend with the Catholic Church, then the anti-abortion movement, and modernisation theorists confronted fiscal conservatives in government, America's scientists went head to head with each other — behind official doors, on television, in the news media, and in academic publications — over whether America should limit nuclear testing. There was ample opportunity to interfere in each other's performances of expertise.

These factors make for an analytical narrative that is more complex than the other two case studies, and involves a larger and more diverse cast of characters, hence this chapter is longer. I focus less on performances of expertise which articulated the scientific narrative of fallout, and more on performances which engaged with that narrative once it was in general

¹¹ See Bridger (2015), Chapters 1-2.

¹² In the 1950s, the Los Alamos laboratory was known as the Los Alamos Scientific Laboratory (now known as the Los Alamos National Laboratory). The University of California Radiation Laboratory at Livermore was founded as branch of the University of California Radiation Laboratory at Berkeley. It became independent in 1971, and is now called the Lawrence Livermore National Laboratory.

circulation, and how they legitimised various positions on testing adopted by the American government.

I first consider two state-backed performances of expertise to de-risk fallout, both of which failed to fix ‘the definition of the situation’.¹³ The first was a National Academy of Sciences report into the Biological Effects of Atomic Radiation. Although the Atomic Energy Commission (AEC) — the civilian agency which oversaw the country’s nuclear weapons programme — heavily influenced its proceedings, it was unable to control the activities of the genetics panel. They issued a stark warning about the cumulative effects of fallout on the biological composition of the American population. The first clear articulations of the scientific narrative of fallout appeared as responses to the NAS study, whose publication coincided with the 1956 presidential elections. The Democratic nominee, Adlai Stevenson, embraced this narrative and made a test ban the centre of his campaign platform. This forced Eisenhower administration officials to adopt the opposite position in public, even as they pursued a similar agenda behind closed doors.

The second notable performance to de-risk fallout was by AEC Commissioner Willard Libby. He legitimised the government’s testing programme by asserting that the dangers of fallout were minimal, especially when compared to the threat posed by the Soviet Union. By dramatically revealing Project Sunshine, the AEC’s covert investigation into fallout hazards, Libby claimed epistemic authority over non-government scientific experts who lacked access to such data. This claim, as well as his counter-narrative, were dismantled by Joint Committee on Atomic Energy’s hearings on fallout. They provided a prominent platform for opponents

¹³ Goffman (1956), p. 3.

of testing to dramatise the dangers of fallout, and punctured the impression that the AEC's stance on testing derived from objective knowledge of its associated risks.

Next, I introduce two of the most prominent expert voices against restrictions on testing: Edward Teller, remembered today as 'the father of the hydrogen bomb', and Ernest Lawrence, who directed the Livermore laboratory. In collaboration with AEC Chairman Lewis Strauss, they enticed government officials and the public with the prospect of 'clean' weapons which would produce little to no radioactive debris, but whose development required continued testing. Thus, they re-directed the scientific narrative of fallout to serve their agenda. Although they successfully concealed the serious obstacles to developing clean weapons from decision-makers, Eisenhower was only momentarily sidetracked from his efforts to engage the Soviet Union in test ban talks at the 1957 UN Disarmament Conference.

Eisenhower's main reason for pursuing a test ban agreement was to make progress towards comprehensive disarmament, and thus his early efforts formed part of broader disarmament negotiations. In addition, he and Dulles recognised that the scientific narrative of fallout was turning American and world public opinion against the government's testing programme. While both of them were inclined to seek a treaty with the USSR, they would not act without an effective response to the AEC and Department of Defence's objections that a treaty would compromise US national security.

Because of this, I argue that pro-test ban nuclear scientists made the most headway within the Eisenhower administration when they spoke as defence experts. In Sections 5 and 6, I focus on their performances of defence expertise as part of the President's Science Advisory Committee. PSAC first demonstrated that it was possible to design a monitoring system that would effectively deter clandestine testing by the Soviet Union. They then showed that a test ban would 'freeze' America's technological superiority in nuclear weapons development for

a number of years. In this way, they broke the association between continued testing and enhanced national security against the Soviet threat. This empowered Eisenhower and Dulles to take the first tangible steps towards regulating nuclear testing: a multilateral conference of experts to design a system of monitoring a test ban, and the announcement of a year-long moratorium on testing in August 1958. PSAC's performances were critical in legitimising the government's pursuit of a test ban independently of a broader agreement on disarmament. Although this made a test ban easier to achieve in principle, negotiations were frustrated by a number of factors, and the Eisenhower presidency would end without a treaty.

Finally, I discuss the ratification of the PTBT during the Kennedy administration, and the congressional hearings that formed a key stage in this ratification process. The hearings were the stage for a major confrontation between scientific opponents and proponents of a test ban. I analyse how Teller's efforts to mobilise legislative opposition to the PTBT were counteracted by administration officials, in partnership with Chairman Fulbright of the Senate Foreign Relations Committee. During the hearings, Teller was discredited as both a scientific expert and a defence expert. However, he inflicted considerable damage in the lead-up to ratification through his private audiences with the Joint Chiefs and influential senators. Partly to counter his influence, the Kennedy administration committed to an expanded programme of nuclear weapons development.

1. Globalising fallout

The key difference between an atomic bomb and a hydrogen (or thermonuclear) one is the method of detonation. Atomic bombs rely on fission: the release of energy that comes from splitting the nuclei of a heavy element like plutonium. Detonating a hydrogen bomb also begins with the fission of plutonium or uranium. The X-rays from this primary explosive cause hydrogen atoms contained within a secondary chamber to fuse into heavier, helium

nuclei, thus amplifying the fission chain reaction in its uranium encasement.¹⁴ The energy released by a hydrogen bomb is several orders of magnitude more powerful than an atomic one: the first hydrogen bomb tested at Enewetak Atoll in 1952 yielded over ten megatons (ten thousand kilotons) of TNT.¹⁵ By comparison, the estimated yield of the bomb which fell on Hiroshima in 1945 was 12 to 18 kilotons.

It is fission that causes radioactive fallout. In the 1950s, fallout was transformed from ‘a relatively harmless side effect’ of an essential military activity — stockpiling nuclear weapons — to an ‘unacceptable hazard to the whole world’.¹⁶ The extent to which radioactive particles could disperse across the globe was not immediately apparent. Before the nuclear age, research into the dangers of radiation focused on health problems caused by direct radiation exposure in different settings: laboratories, factories, and World War I field hospitals.¹⁷ Studies of fallout in the US, initially confined to the proving grounds of nuclear tests, assessed the hazards of short-term exposure to large quantities of radiation. Incidental discoveries of small amounts of radiation far away from test sites were not viewed as dangerous.¹⁸

This changed in March 1954. The Castle Bravo nuclear test at Bikini Atoll in the Marshall Islands provided a glimpse into the undesirable future of unregulated testing. The force of the detonation was much larger than expected: 750 times that of the bombs used on Hiroshima and Nagasaki.¹⁹ The human casualties of the fallout included the inhabitants of the

¹⁴ This is the Teller-Ulam two-stage thermonuclear bomb design that is the template for most hydrogen bomb designs. Encyclopedia Britannica (2021).

¹⁵ TNT stands for trinitrotoluene.

¹⁶ Higuchi (2020), p. 8.

¹⁷ Professional bodies first issued recommendations for protection against radiation exposure in the interwar era. See Boudia (2007).

¹⁸ Jessee (2013), p. 2.

¹⁹ Kopp (1979), pp. 404-405.

surrounding islands, members of the American military, and the Japanese fishing crew of the *Lucky Dragon*. When Japanese authorities discovered that the *Lucky Dragon*'s haul of tuna was contaminated by radiation, they tested catches from across the Western Pacific, deeming many of these to be unfit for consumption. This triggered a nationwide panic that was exacerbated by the parallel discovery of high levels of radioactivity in rainwater.²⁰ Back in America, the physicist Ralph Lapp used data released by the AEC to estimate that fallout from the Bravo shot covered some 8,000 square miles.²¹

Occurring just two years after the first test of a hydrogen bomb, Ivy Mike, the Bravo shot revealed that fallout effects could not be effectively contained by conducting tests in isolated locations.²² Prior to this, there was little appreciation that ecological disturbances in one corner of the planet could reverberate globally. Environmental campaigns first proliferated during the 19th century, as industrialisation polluted the cities of Europe and North America while their colonies were plundered for their natural resources.²³ Policy initiatives focused on protecting particular habitats or species from human destruction, such as by creating national reserves; reigning in the exploitation of natural resources, such as through forest management; or safeguarding the health of workers in factories. They operated at a national or sub-national scale: the minimal international cooperation of the time aimed to protect migratory species, or establish common standards for conserving nature.²⁴

²⁰ Higuchi (2020), Chapter 2.

²¹ Divine (1978), p. 37.

²² As Jessee argues, scientists initially thought of the Atoll as a 'natural laboratory' which represented a 'discrete, isolated, and hence closed system'. Jessee (2013), p. 155.

²³ Rome (2003), p. 526; see also McCormick (1989), Chapter 1.

²⁴ Richard Grove (2003) argues that state management of the environment took off during the late 18th century as the exploitation of colonial land gathered pace. Grove conflates increasing state regulation of the environment with the emergence of a 'global environmental consciousness' where the biosphere itself was treated as a distinct object of governance. For example, deforestation was hypothesised to disturb the local

Not until the advent of nuclear weapons would the planet become legible as a ‘spatially integrated biosphere’.²⁵ While the population scientists and modernisation theorists discussed previously worked with relatively stable — if also relatively recent — conceptions of population and economy, scientists scaled up the global biosphere by studying the effects of fallout. Using data from the Bravo and Mike detonations, meteorologists showed that fallout penetrated the stratosphere, and, in the process, mapped global wind patterns.²⁶ The first worldwide network of weather stations was established on Air Force bases to monitor the dispersion of radioactive particles, enabling the atmosphere to be represented ‘as a global system of molecules’.²⁷ The AEC-sponsored Project Sunshine, which I discuss in Section 3, sampled extensively from animals, plants, and humans to document the accumulation of strontium-90 in the food chain. Oceanographers charted global ocean currents as they surveyed the effects of radioactivity from fallout on aquatic life.²⁸ In general, the extensive use of radiotracers in environmental science research helped to erode ‘the idea of the ecosystem as a discrete self-contained space’.²⁹ Thus, the Bikini Atoll incident not only placed nuclear testing and its associated hazards on the public agenda, but also enabled those researchers at US universities, government departments, and national laboratories following radioactive particles through various ecological pathways to *inscribe* the biosphere into existence as a global governance object.

weather patterns, but this was not linked to a concern that worldwide deforestation could fundamentally alter the global climate.

²⁵ Jessee (2013), p. xiv.

²⁶ Masco (2010), pp. 12-13.

²⁷ Allan (2017b), pp. 143-144. As Allan argues, this was a foundation for further research sponsored by the Navy and the Air Force that established the climate as a global governance object.

²⁸ Jessee (2013), pp. 306-307.

²⁹ Ibid. p. 268.

2. The Biological Effects of Atomic Radiation Report (1956)

Geneticists were the first scientists to draw attention to the risks of radiation exposure, including from fallout. Incensed by AEC Chairman Strauss's denials that fallout from testing impacted human health or the environment, they began to consider 'the cumulative effects of chronic, as opposed to acute, doses of radiation from fallout'.³⁰ Eminent geneticists warned that 'all levels of radiation exposure increased the number of mutations in human genes, and that these mutations should be considered harmful'.³¹ Their differences with other scientists and the AEC came to a head during a National Academy of Sciences (NAS) inquiry into the Biological Effects of Atomic Radiation (BEAR). The BEAR study was commissioned by the US government in an attempt to respond to public trepidation over fallout from Bravo, but ultimately failed to fix 'the definition of the situation' and achieve narrative closure.³²

There were several reasons for this. The first was the sheer number of participants: six panels of scientists from different disciplines issued reports outlining their findings. Only the genetics and pathology panels offered coherent analyses of the risks of radiation exposure, so their reports received the most attention. The second was arguably inherent in the nature of the enterprise. The US government wanted a study that would confirm that the risks of fallout to the biosphere were minimal. The AEC, whose reputation had been tarnished by how it handled public relations after the Bikini Atoll incident, worked behind the scenes to influence the study's proceedings.³³ However, as the study had to be credibly independent, the government could not interfere directly in the selection of the panellists, or their deliberations.

³⁰ Kopp (1979), p. 406.

³¹ Hamblin (2007), p. 147.

³² Goffman (1956), p. 3.

³³ NAS leadership also coordinated closely with the British Medical Research Council (BMRC), which was producing a similar report for the UK government, so that their findings would not contradict each other. Hamblin (2007), pp. 159-161.

That is, it could not control the stage on which the NAS scientists appeared. Thus the genetics panel, which was dominated by AEC critics, became a platform for contesting the AEC's public stance on fallout. Simultaneously, the panellists inadvertently advanced the AEC's agenda by agreeing on a 'permissible dose' of radiation exposure, despite admitting backstage that such a figure was arbitrary.

This episode demonstrates how performances of expertise which fail to achieve closure can still have political effects, albeit unintended ones. At the level of policy discourse, they provide ammunition and an audience for counter-performances. The first clear articulations of the scientific narrative of fallout appeared as responses to the BEAR study, when scientists who disputed its conclusions voiced their objections in the media, in congressional hearings, and in academic journals. At the level of policymaking, failure to achieve closure can constrain state action. The BEAR study became an artefact wielded by both parties in the 1956 presidential elections, moving radioactive fallout further up the public agenda. The Democratic nominee, Adlai Stevenson, made a test ban agreement a key campaign pledge. This forced the Eisenhower administration, which was quietly exploring this very possibility, to adopt the opposite position in public, foreclosing an early opportunity to progress negotiations with the Soviet Union.

Historical background

The US government was unable to contain the debate over radioactive fallout that followed the Bikini Atoll incident, largely due to the AEC's clumsy handling of public relations. At a press conference in March 1954, Strauss divulged that a bomb the size of Bravo could obliterate a city like New York.³⁴ The AEC's first public report on radioactive fallout was not

³⁴ Greene (2007), p. 53.

published until almost a year later, fuelling suspicions that it was concealing information from the American people.³⁵ The report admitted that levels of atmospheric radiation in the US had increased since Bravo, but were still ‘far below levels which could be harmful in any way to human beings, animals or crops’.³⁶ The next month, the TEACUP test series in Nevada created a radioactive cloud a thousand miles wide, stretching all the way to New Jersey.³⁷ This sparked a nationwide panic, although few Americans at the time understood what fallout actually meant. Public distrust was further exacerbated by the revelation that Strauss had prevented the Nobel laureate Herman Muller from presenting on the genetic effects of radiation at an atomic energy conference that summer. The *Washington Post* accused Strauss of ‘muzzling dissent’.³⁸

In March 1955, the Federation of American Scientists called on the UN to assemble a multinational committee of scientists to evaluate the impact of nuclear testing on genetics, and determine a ‘maximum permissible limit to fallout emissions’, which would inform a global regime to restrict nuclear testing.³⁹ The US government rejected this call. AEC leadership worried that an independent inquiry on fallout could open up controversies that ‘might create an irresistible momentum for the limitation of nuclear testing — and even for the prohibition of nuclear weapons’.⁴⁰

Others in the Eisenhower administration generally agreed with the AEC, even though they were divided over whether a test ban was in America’s best interests. Eisenhower had first

³⁵ It was delayed at the request of the State Department.

³⁶ AEC press release, quoted in Divine (1978), p. 8. See also p. 36.

³⁷ Ibid. p. 43.

³⁸ Quoted in Pfau (1984), pp. 192-193.

³⁹ Higuchi (2018), p. 105.

⁴⁰ Ibid. pp. 105-106.

expressed an interest in a test ban in the aftermath of the incident on Bikini Atoll.⁴¹ However, he and Dulles depended heavily on the counsel of Lewis Strauss, who was also the president's Special Assistant for Atomic Energy. Deeply suspicious of the Soviet Union, Strauss strongly opposed a test ban on the grounds that the Soviets were likely to cheat.⁴² Through adroit stage management, Strauss controlled what information about nuclear testing reached Eisenhower and his top advisors. He stacked an NSC-commissioned inquiry into the technical viability of a test ban with his favoured scientists, who concluded that it was infeasible. He also intercepted AEC Commissioner Thomas Murray's direct appeals to the president to seek a test ban.⁴³

To stave off growing calls for an independent review, the American government commissioned a report from the NAS on the effects of radioactive fallout on the biosphere. The British government requested the same of the British Medical Research Council. That summer, the Western powers jointly introduced a UN resolution to establish a scientific committee to investigate the effects of fallout. To retain control over the committee's discussion and output, the co-sponsors agreed that each country would appoint its own representatives, rather than the Secretary General. The publication of the NAS and BMRC reports were timed to influence discussions between scientists appointed by the UN.⁴⁴

⁴¹ Greene (2007), pp. 69-70.

⁴² For a succinct account of Strauss's views on a test ban, see Parsons and Zaballa (2017), pp. 117-130.

⁴³ Greene (2007), pp. 71-79.

⁴⁴ Higuchi (2018), p. 107.

Performance: backstage

While the BEAR panels were supposedly independent of the AEC, they were actually ‘separated only in a technical sense’.⁴⁵ Many NAS members were AEC employees, and the panels had to rely on AEC data and personnel with access to classified information. Although the Rockefeller Foundation financed the BEAR report, the AEC was an important source of funding for other NAS studies. Hence, the NAS ‘went out of its way to placate the AEC throughout the whole BEAR process’.⁴⁶ The AEC, meanwhile, tried to turn the BEAR study ‘from a detached survey of existing information into a means for recommending specific figures of permissible radiation exposure’ so that it could continue nuclear tests.⁴⁷

The inquiry comprised six panels: pathology, genetics, meteorology, oceanography and fisheries, agriculture and food supplies, and radioactive waste disposal.⁴⁸ The environmental science panels quickly lost sight of their original mission — to holistically evaluate the global risks of radiation exposure, including from fallout. They also avoided recommending any policy interventions to manage those risks.⁴⁹ The genetics panel adopted a completely different approach. Two of its members, Alfred Sturtevant and Hermann Muller, were well-known critics of the AEC. Muller doubted whether the panel’s conclusions could be truly independent, as all the data released to the genetics panel was at the AEC’s discretion.⁵⁰ The panellists agreed that the genetic risks of fallout were small relative to those posed by medical appliances, but bristled at the AEC’s public insistence that further testing had no long-term

⁴⁵ Hamblin (2007), pp. 149-150.

⁴⁶ Ibid. pp. 150-154.

⁴⁷ Ibid.

⁴⁸ National Academy of Sciences (1956).

⁴⁹ Higuchi (2011), pp. 140-147.

⁵⁰ Hamblin (2007), p. 156.

consequences for humanity.⁵¹ They explicitly rejected this claim in the final report, which also noted ‘a proper concern to see to it that the fall-out level does not increase to more serious levels’.⁵²

Backstage, the panellists encountered several challenges. The immediate effects of radioactive fallout on human health were easy to grasp, but it was more difficult to explain how fallout would impact the genetic composition of future populations. They faced an additional dilemma. On the one hand, they sought the epistemic authority to determine what the ‘permissible dose’ of radiation exposure was. However, the notion of a permissible dose contradicted their main technique of prospection, the *linear no-threshold model*, which held that there was no level below which radiation exposure would not cause genetic damage. Eventually, the group settled on ten roentgens as a permissible dose of lifetime exposure to radiation.⁵³ They all agreed that this figure was essentially arbitrary, as inadequate data prevented the calculation of an accurate estimate.⁵⁴ Still, they justified its inclusion on the basis that *they*, leading disciplinary figures, were authorised to make such a determination. One panellist opined that ‘a geneticist...is in a very much stronger position to arrive at this kind of subtle, curious judgement than other people are’.⁵⁵ ‘This is the opportunity for us to take some control over the situation’, another reasoned, ‘I think we all inwardly rebelled against the idea of having to give an answer...to a question that can’t be answered scientifically. However, for practical purposes someone has to set this dose now...if we don’t

⁵¹ Discussed further in Section 3.

⁵² Higuchi (2011), pp. 151-154.

⁵³ Hamblin (2007), pp. 157-158.

⁵⁴ Jolly (2004), p. 331.

⁵⁵ Warren Weaver, president of the American Association for the Advancement of Science quoted in *ibid.* p. 334.

do it, somebody else is going to do it'.⁵⁶ Ironically, an authoritative statement on the permissible dose was exactly what the AEC wanted from the NAS: it legitimised continued testing so long as fallout did not result in exposure exceeding this level.⁵⁷

Performance: front stage

In June 1956, the BEAR committee published a summary report, pitched at the general public, and each of the panels also published its own report. The summary report did not attempt to integrate the findings of the different panels into a coherent narrative, stating only that 'as atomic activity is stepped up throughout the world, the amount of radiation in our surroundings may be substantially increased. This could have a profound effect on all forms of life'.⁵⁸ With the exception of pathology and genetics, no panel offered a clear assessment of what those effects could be. Each effectively answered: 'it depends'. A recurring theme was that there was insufficient information. The oceanographers did not know how deep ocean waters mixed with surface waters, and thus whether 'long-lived radioactive isotopes' like strontium-90 could be safely disposed of if deposited on the ocean floor, while the meteorologists did not fully understand how the upper and lower layers of the atmosphere mixed, so could not say how radioactive particles would be dispersed throughout them.⁵⁹ The report ended inconclusively: 'The development of atomic energy is a matter for careful, integrated planning. A large part of the information that is needed to make intelligent plans is not yet at hand. There is not much time left to acquire it'.⁶⁰

⁵⁶ William Russell, a geneticist at the Oak Ridge National Laboratory, quoted in *ibid.* pp. 309.

⁵⁷ Higuchi (2020), pp. 94-95.

⁵⁸ National Academy of Sciences (1956).

⁵⁹ *Ibid.*

⁶⁰ *Ibid.*

Amid this vagueness, the scientific narrative advanced by the genetics panel stood out. The object of this narrative was the biological composition of the American population.⁶¹ According to the genetics panel, radiation caused harmful genetic mutations which would be inherited by future generations. Any radiation beyond the levels occurring naturally in the environment — that is, from medical devices, nuclear testing, and industrial applications of atomic energy — would produce additional mutations directly proportionate to the amount of exposure. In other words, there was no ‘safe’ threshold below which these mutations would not occur.⁶² While the additional exposure caused by fallout from nuclear testing in the US was small compared to background radiation, ‘since any additional radiation is genetically undesirable the fallout dose is genetically undesirable’, the impact would reverberate through the generations: ‘on the average, a detrimental mutation, no matter how small its harmful effect, will in the long run tip the scales against some descendent who carries this mutation, causing his premature death or his failure to produce the normal number of offspring’.⁶³ The undesirable future the panellists envisaged was of a population whose collective genetic makeup was corrupted by exposure to radiation. They did not give specific examples of the damage to a population that these mutations could cause — presumably because these were still unknown.⁶⁴

The panellists proposed five measures to manage the risks of radiation exposure to the American population: keep radiation exposure records for every citizen; to reduce the use of medical X-rays to essential uses only; keep the average exposure of the population’s

⁶¹ This contrasted with the pathology panel, whose members were also interested in the impact on human beings, but at the scale of the individual human body.

⁶² ‘Text of Genetics Committee Report Concerning Effects of Radioactivity on Heredity’, 13 June 1956. *NYT*.

⁶³ *Ibid.*

⁶⁴ *Ibid.*

reproductive cells below ten roentgens from birth until age thirty; periodically reconsider the ten roentgen limit; and ensure that an individual's reproductive cells not be exposed to radiation of more than fifty roentgens.⁶⁵ Although the panel did not explicitly designate an actor as responsible for these interventions, it was clear that only the federal government was capable of implementing such sweeping initiatives.

Political effects

The US government hoped that the NAS's performance of expertise would reign in public debate over the hazards of radioactive fallout from nuclear testing. It did not. Disagreements over the BEAR study quickly moved into the public sphere, and the first clear articulations of the scientific narrative of fallout appeared as responses to the report. For example, Ralph Lapp, a Manhattan Project physicist who became a leading campaigner for restrictions on testing, pointed out that the linear no-threshold model implied that the cumulative effects of continued nuclear tests could still be massively harmful. Edward Lewis, a geneticist, took new medical data from the survivors of the Hiroshima and Nagasaki bombings and calculated that the 'permissible' dose of radiation would still lead to an additional 500 to 1000 cases of leukaemia in the United States.⁶⁶

Had 1956 not also been an election year, the controversy over the BEAR study might have evaporated. Instead, the study helped turn nuclear testing into a core campaign issue. The Democratic presidential candidate, Adlai Stevenson, had proposed a unilateral suspension of testing as early as April, but he initially framed this as a disarmament initiative.⁶⁷ A test ban became a centrepiece of his campaign only after the study was published. He incorporated

⁶⁵ Ibid.

⁶⁶ Higuchi (2011), pp. 160-162.

⁶⁷ Higuchi (2020), p. 101.

the scientific narrative of fallout into his rhetoric, describing strontium-90 as ‘the most dreadful poison in the world’.⁶⁸ He attacked the BEAR study as outdated, and attracted support from scientists who disagreed with its findings. In response, Strauss and Robert Cutler hurriedly assembled an opposing group of scientists to make a public statement emphasising the genetics panel’s conclusion that fallout from current rates of testing posed little risk to humanity.⁶⁹

In late September, Stevenson abandoned the idea of a test moratorium and instead called for negotiations towards a multilateral test ban agreement. This impeded the Eisenhower administration’s covert explorations of the very same possibility. The president’s newly-appointed Special Assistant for Disarmament, Harold Stassen, continued to find little enthusiasm for a comprehensive test ban amongst his colleagues, although they came to accept that ‘some form of test limitation might become politically necessary’.⁷⁰ Even so, senior officials remained adamant that this should be pursued as part of a broader disarmament agreement. Citing growing public concerns over fallout, Eisenhower directed Stassen to work with other government departments and devise a multilateral agreement to limit or halt nuclear testing, ‘conditioned upon prior installation of effective, reciprocal inspection and detection systems’.⁷¹ This effort foundered as Eisenhower, Nixon, and other officials publicly marshalled the arguments of test ban opponents in order to portray Stevenson as playing into Soviet hands. Having initially derided Stevenson’s test moratorium as ‘naive’ and ‘foolish’, they seized upon an open letter from the Soviet Premier Nikolai Bulganin to Eisenhower expressing support for Stevenson’s multilateral test ban proposal as evidence that the

⁶⁸ Greene (2007), p. 94.

⁶⁹ Ibid. p. 95.

⁷⁰ Ibid. p. 99.

⁷¹ Jackson, ‘Memorandum of a Conversation’, 11 September 1956. *FRUS*.

Democratic nominee was walking into a ‘Communist mousetrap’.⁷² They doubled down as Election Day approached, denying that Eisenhower had ordered his advisors to work out an international agreement in September.⁷³ Thus, an early opportunity to progress on test ban negotiations was foreclosed.

3. The Atomic Energy Commission and Project Sunshine (1954-1957)

The AEC’s approach of publicly downplaying the dangers of radioactive fallout belied its longstanding interest in this subject. Health complaints from residents living downwind from its Nevada test site, coupled with the Bravo incident, elevated the importance of its covert investigations into the global hazards of radioactive debris. This research, codenamed Project Sunshine, was led by Willard Libby, a physical chemist known for his contributions to radiocarbon dating. After becoming an AEC commissioner in 1954, Libby used data from Project Sunshine in performances of expertise to convince his fellow scientists and the public that the risks of fallout from nuclear testing were minimal. The project itself did not become public knowledge until early 1956, when it was revealed as part of a strategy to weaken opposition to nuclear testing. As opponents of nuclear testing highlighted the risks of fallout to create a dissonance between the American government’s duty to protect its citizens and its aggressive testing program, Libby sought to re-establish congruence by de-risking fallout, arguing that maintaining adequate defences against the Soviet Union was a greater national security concern.

⁷² Greene (2007), pp. 107-108. The phrase ‘Communist mousetrap’ is from Thomas Dewey, the ex-governor of New York who played an important part in Eisenhower’s re-election campaign, quoted in Divine (1978), p. 100.

⁷³ Greene (2007), p. 110.

The AEC was advantaged by its monopoly on information on the effects of fallout from nuclear tests, while opponents of a test ban outside of government had to extrapolate from the public remarks of AEC officials. However, Libby's performances of expertise to de-risk fallout were undone by a series of congressional hearings chaired by Chet Holifield of the Joint Committee on Atomic Energy (JCAE), which oversaw the AEC's activities. The hearings provided a conspicuous platform for opponents of testing to dramatise the dangerous consequences of fallout. Although they produced no consensus on the exact nature or extent of those dangers, they educated the general public about their existence, and established fallout as a 'global health problem', as Holifield summarised.⁷⁴ This demonstrates how the porous, disaggregated nature of American policymaking creates opportunities for stakeholders to stage interventions that shape political discourse. Those interventions can disrupt efforts by certain performers to achieve narrative closure.

Performance: backstage

The AEC's investigations into fallout dated back to the era of American nuclear monopoly, when researchers estimated the number of bombs that could be dropped on the Soviet Union before radioactive particles would reach the US.⁷⁵ Project Gabriel, a 1949 study into the long-term hazards of fallout to humans and the environment, concluded that strontium-90, a byproduct of nuclear fission, posed the greatest risk to human health: it was released in far larger quantities than plutonium and accumulated in human bones and teeth, where it remained active for several decades.⁷⁶ Project Sunshine, which launched in 1953, extended

⁷⁴ Holifield, 'Radiation Hazards in War and Peace', 28 June 1957. *Congressional Record (House Proceedings)*, Volume 103, Part 8, pp. 10569-10573.

⁷⁵ Hacker (1994), p. 181.

⁷⁶ Bruno (2003), p. 240. Strontium-90 is not found in nature.

this research after the US successfully tested its first thermonuclear weapon. Libby's researchers looked at the global dispersion of strontium-90 and other radioactive isotopes from nuclear war and atmospheric testing, and established a worldwide network of stations which sampled from 'rail, soil, aquatic systems, plants, animals, humans, and processed food'.⁷⁷ Their methods of human tissue sampling proved particularly controversial: the AEC used its contacts in the medical profession to surreptitiously collect bone and tissue samples from corpses across the US and abroad, without disclosing the reason why to either their contacts, or to the families of the deceased.⁷⁸

In 1953, residents living downwind from the AEC's proving grounds in Nye County, Nevada, began complaining that exposure to radioactivity was damaging their health. These concerns multiplied after the Bravo incident in 1954 and the furore over the BEAR study discussed above. As the AEC recognised that continued testing depended on assuaging public fears over fallout, Libby became the 'leading spokesman for the view that fallout posed minor hazards at worst'.⁷⁹ He exercised directive dominance over what fallout data was drip-fed to the public, as well as dramatic dominance over how that data was presented. To his colleagues, he described Project Sunshine as the AEC's 'most important work' after weapons development.⁸⁰ If the scientific narrative of fallout gained traction, he argued, it might force the cessation of nuclear testing, which would be 'disastrous to the free world'.⁸¹

⁷⁷ Ibid. p. 241.

⁷⁸ This was not revealed until the 1990s, when the Clinton administration appointed a committee to review the government's history of human radiation experiments. The AEC also explored the legality of 'body-snatching': the secret removal of corpses from morgues. See US Advisory Committee on Human Radiation Experiments (1996), p. 404.

⁷⁹ Hacker (1994), p. 184.

⁸⁰ Libby quoted in Higuchi (2011), p. 202.

⁸¹ Ibid.

Backstage, Libby was quick to suppress evidence that might heighten public anxiety. For example, John Laurence Kulp, a British geochemist who collected human bones for Project Sunshine, predicted that strontium-90 concentrations in the Welsh population would reach a maximum permissible dose by the year 1970, even with no further nuclear tests.⁸² Libby blocked Kulp from publishing this finding in a declassified report, calling it the ‘type of approximate consideration that led to the difficult furore in the last political campaign’.⁸³ Libby also refused to consider alternatives to his model of how radioactive particles were dispersed through the atmosphere, which formed the backbone of his public performances of expertise.⁸⁴ He claimed that dispersion happened slowly and evenly, despite a 1953 study for Project Sunshine, carried out by the RAND Corporation and directed by himself, reaching the opposite conclusion. The study’s authors found that

the concept of uniform worldwide contamination has little meaning and...the necessary assumptions for such a calculation are unrealistically simple. *The contamination undoubtedly will occur unevenly — in ‘blobs’ over large areas — mainly because of large differences in localised fallout concentrations...* differences in eating habits, disease and environmental natural strontium content of soil will render certain populations more vulnerable to contaminant than others.⁸⁵

The AEC decided to make Project Sunshine public knowledge as the House Subcommittee on Government Operations held hearings on ‘Civil Defence for National Survival’ in 1956.⁸⁶ There, Ralph Lapp pressed the AEC to publish data about the effects of strontium-90 from Rongelap, one of the islands evacuated after Bravo.⁸⁷ Libby pursued a similar agenda within

⁸² Ibid. p. 203.

⁸³ Quoted in *ibid.*

⁸⁴ Ibid.

⁸⁵ RAND Corporation (1953), p. 6. My emphasis. Libby is named as the director of the study in a report by President Clinton’s Advisory Committee on Human Radiation Experiments. See US Advisory Committee on Human Radiation Experiments (1996), Chapter 13.

⁸⁶ The hearings took place between 31 January and 28 June 1956.

⁸⁷ ‘Statement of Ralph E. Lapp’, 20 March 1956. *Hearings Before a Subcommittee of the Committee on Government Operations, House of Representatives, 84th Congress, 2nd Session*, pp. 763-797.

the AEC, but for different reasons. He pointed out to his fellow commissioners that the AEC ‘could not indefinitely argue that testing was safe’ if it did not declassify ‘the statistics upon which its conclusions were based’.⁸⁸ A strategy of ‘openness’, he reminded them, had mobilised public support for Operation REDWING, which tested various ‘clean’ bomb designs.⁸⁹ This openness, however, did not extend to releasing information about the ‘origins and technical assumptions’ behind Sunshine, which would not be disclosed until 1957.⁹⁰

Performance: front stage

Libby’s performances of expertise to de-risk fallout mainly involved public engagement with the scientific community. He used data from Sunshine in a stream of journal articles and open letters to opponents of nuclear testing, aware that his comments would receive national press coverage because of his cultural capital as an eminent scientist and an AEC Commissioner. He also delivered seven speeches to various academic associations about radioactive fallout between 1955 and 1957.⁹¹ His approach differed from that of his fellow commissioner, Lewis Strauss. Strauss tended to attack the scientific narrative of fallout by arguing that it was superseded by the need to develop a robust nuclear deterrent to counter the Soviet threat. While Libby occasionally made similar statements, his performances of expertise focused on challenging the claim that nuclear testing harmed the biosphere in the first place.

Speech at Northwestern University

Libby formally revealed Project Sunshine during a Northwestern University speech in January 1956, ‘Radioactive Fallout and Radioactive Strontium’. It aimed to convince the

⁸⁸ Quoted in Hewlett and Holl (1989), p. 331. Clean bombs are discussed in Section 4.

⁸⁹ Ibid.

⁹⁰ Lapp (1959), p. 27; Masco (2006), p. 29.

⁹¹ Atomic Energy Commission (1961), p. 8.

audience that, although fallout in the immediate vicinity of a nuclear blast constituted ‘a very real hazard’, the global dispersion of radioactive particles did not damage the biosphere, and was therefore not a national security risk.⁹² Libby described two forms of radioactivity that could emanate from detonating a nuclear weapon: radioactivity induced in the environment, especially the atmosphere, and radioactivity produced in the weapon itself.⁹³ Neither would expel harmful quantities of radioactivity. In the case of induced radioactivity, neutrons released in the atmosphere would create small quantities of radioactive carbon, which were ‘essentially safe’ due to the ‘diluting effects of carbon dioxide in the atmosphere’. Leading the audience through step-by-step calculations, he concluded that 7,800 nuclear weapons would have to be detonated in order ‘just to double the radiocarbon content’ of atmospheric carbon dioxide.⁹⁴ This number would rise to a staggering 520,000, if one also factored in the interchange between atmosphere and sea water which would remove ‘excess’ radioactivity carbon dioxide. ‘The essential point’, he said, ‘is that the atmosphere is difficult to activate and the activities produced are safe’.⁹⁵

Libby then considered radioactivity produced in nuclear weapons themselves. He first explained how the atomic clouds produced by large, megaton nuclear weapons would enter the stratosphere, a layer of atmosphere ‘essentially isolated from the lower layer in which we live’. That fallout would be ‘deposited only at a very slow rate’ and be distributed ‘broadly over the earth’.⁹⁶ The atomic clouds produced by smaller, kiloton weapons would remain in the troposphere, where the fallout produced would be quickly washed out by rainfall, and ‘its

⁹² Libby (1956), p. 660.

⁹³ ‘Induced radioactivity’ refers to ‘radioactivity that is created when stable substances are bombarded by ionising radiation’. US Nuclear Regulatory Commission (2021).

⁹⁴ Libby (1956), p. 657.

⁹⁵ Ibid. p. 658.

⁹⁶ Ibid.

lifetime in the atmosphere will be a matter of weeks'. Next, he tackled the issue of strontium-90, and, at this point, dramatically revealed the existence of Project Sunshine. AEC's researchers had 'extensively studied' the effects of fallout on plants, humans and animal products: 'it is possible to say unequivocally that nuclear weapons tests as carried out at the present time do not constitute a health hazard to the human population insofar as [strontium-90] is concerned'. '11,000 megatons of fission energy' would be needed to produce the maximum permissible concentration of strontium-90 of '1 microcurie per standard man'.⁹⁷ Additionally, at each stage of the food chain — from soil to plants, plants to animals, animal byproducts to humans — the uptake of strontium-90 would diminish.⁹⁸ Human bodies, therefore, had the lowest concentrations of strontium-90 out of all animals.⁹⁹ Directly rebuking the geneticists' claims, Libby stated that since strontium-90 accumulated in the bones, 'it constitutes essentially no genetic hazard, for its radiations do not reach the reproductive organs'.¹⁰⁰

Letter to Dr. Albert Schweitzer

Another kind of performance Libby frequently staged during this period was publishing open letters to well-known supporters of testing restrictions, most notably his response to Dr. Albert Schweitzer, the 1952 recipient of the Nobel Peace Prize. In April 1957, Schweitzer made an impassioned appeal for a test ban agreement over Norwegian radio. It attracted global media coverage and galvanised the anti-nuclear movement, especially in Europe, to the profound

⁹⁷ Ibid. p. 659.

⁹⁸ Strontium-90 is a 'bone-seeker' — it behaves in a similar way to calcium.

⁹⁹ Libby (1956), p. 659.

¹⁰⁰ Ibid.

consternation of some across the Atlantic: Lewis Strauss complained that Schweitzer had dealt a 'body blow to the testing programme'.¹⁰¹

Schweitzer's appeal, which was republished as a letter in the *Bulletin of Atomic Scientists*, closely followed the scientific narrative of fallout that test ban opponents in the US had been promoting for several years. He painted a vivid image of radioactive debris dispersing through an interconnected biosphere: 'radioactive clouds will constantly be carried by the winds around the globe and that some of the dust, by its own weight, or by being brought down by rain, snow, mist, and dew, little by little, will fall down on the hard surface of the earth, into the rivers, and into the oceans'.¹⁰² It would be absorbed by humankind through soil, food, and water. While the full effects of nuclear testing on the biosphere would not be known for generations, existing studies of the area surrounding nuclear production plants demonstrated that immense concentrations of radioactivity could accumulate in the environment. Fallout from nuclear testing, therefore, represented a 'catastrophe for the human race'. This undesirable future could be avoided by ending further nuclear weapons experiments.¹⁰³

Libby's response was printed in the same issue of the *Bulletin*. He started with an authoritative claim to comment on the hazards of fallout, which was also an act of boundary maintenance: 'I am writing to you as a scientist, to present data bearing on a scientific fact'. He spoke as the commissioner of an organisation which had recently conducted 'an intensive study of world-wide fall-out which has revealed most of the information now available on this subject'. This implied that Schweitzer, who was not a nuclear scientist, had no real authority to speak: 'I seriously doubt, from the evidence of your statement, that you have had access to the most

¹⁰¹ Quoted in *ibid.* p. 57; see also Wittner (1995), p. 56.

¹⁰² Schweitzer, 'A Declaration of Conscience', 26 April 1957. Nuclear Age Peace Foundation.

¹⁰³ Schweitzer (1957), p. 205.

recent information'. Libby delegitimised the scientific narrative of fallout by suggesting the risks it highlighted were 'extremely small compared with other risks which persons everywhere take as a normal part of their lives'.¹⁰⁴ People already absorbed radioactivity from cosmic rays in amounts which far exceeded that which was generated by testing: 'the external fall-out radiation has been from 0.7 per cent to about 3 per cent of the natural radiation exposure'. Continued testing, therefore, posed no great risk to the biosphere: 'levels [of radioactivity] about six times the present ones would be reached by the year 2011' if testing continued, which posed negligible danger. On the other hand, outlawing tests would '[abandon] the defence effort which is so essential under present conditions to the survival of the Free World'.¹⁰⁵

Political effects

By downplaying the risks of fallout, Libby's performances of expertise aimed to enable the US government to continue its nuclear testing programme unencumbered by public and scientific opposition. He was prevented from accomplishing this by concurrent congressional efforts to highlight those very risks. Between May and June 1957, the Joint Committee on Atomic Energy held widely-publicised hearings on radioactive fallout and its effects on human beings: a competing stage which the AEC and the Eisenhower administration were unable to control.

The chairman of the Special Subcommittee on Radiation, Chet Holifield, did not have a particular agenda regarding a test ban agreement in mind. Instead, he thought that the public had a right to be informed about the effects of fallout, and the hearings provided an opportunity to wrestle this knowledge from the Eisenhower administration and the AEC.¹⁰⁶

¹⁰⁴ Libby (1957), p. 206.

¹⁰⁵ Ibid. p. 207.

¹⁰⁶ Dyke (1984), pp. 153-154

He also worried that Adlai Stevenson's proposal for a test ban had been 'politically and militarily dangerous', and wanted to contain the widespread confusion and anxiety about fallout it had stoked.¹⁰⁷ Finally, Holifield wanted scientists to retreat from political debate: by clearly separating 'scientific facts' from 'value judgements', scientists would be compelled to 'return to the laboratory and leave the world of politics where they are ill-acclimated'.¹⁰⁸

Over fifty scientists testified, including prominent proponents of the scientific narrative of fallout like Ralph Lapp, Alfred Sturtevant, and Herman Muller.¹⁰⁹ The witnesses contested both of Libby's key claims: that the genetic risks of fallout from testing to human beings were essentially zero, and that fallout fell to Earth slowly and evenly.¹¹⁰ Sturtevant argued that, while the risks of testing to individuals were small, 'they still posed an appreciable hazard to the national or world population as a whole'.¹¹¹ Moreover, the AEC's claim that the dangers of fallout were statistically insignificant compared to daily activities like driving was deceptive: people freely chose to engage in those activities, but had no 'freedom of choice regarding the perils of fallout'.¹¹² Libby had an opportunity to respond to his critics during his own appearance before the subcommittee, but his ability to achieve closure was compromised.¹¹³ The hearings exposed the discord within the scientific community over the exact dangers of fallout, and highlighted the need for further research before sweeping assertions of the kind AEC representatives were inclined towards could be credibly made.

¹⁰⁷ Ibid.; Higuchi (2011), p. 214.

¹⁰⁸ These extracts are from a JCAE staff memo dated 20 May 1957, quoted in Higuchi (2011), p. 213.

¹⁰⁹ Divine (1978), p. 129.

¹¹⁰ For a summary of the hearings, see Mazuzan and Walker (1984), pp. 48-53.

¹¹¹ Ibid. p. 51.

¹¹² Ibid.

¹¹³ His critics included witnesses who were also government employees. For example, Lester Matcha of the Weather Bureau disputed his claim that fallout descended to Earth slowly and uniformly. See Divine (1978), pp. 131-132.

The hearings also destroyed the public impression of candour that the AEC wanted to cultivate by disclosing the existence of Project Sunshine. In his testimony, Ralph Lapp charged the AEC with making ‘reckless or unsubstantiated’ claims regarding fallout, and reeled off a list of inconsistencies between various official statements made between 1955 and 1957.¹¹⁴ Throughout the hearings and afterwards, Holifield and other subcommittee members accused the AEC of deliberately delaying the release of data, and of misleading the public with a ‘play it down’ strategy involving ‘the selective use and release of information to favour a political position’.¹¹⁵ Consequently, Libby’s yearlong campaign to de-risk fallout seemed less like the objective opinion of an informed scientist, and more like propaganda promulgated on behalf of an institution with a vested interest in testing, regardless of the risks.

4. The promise of the ‘clean’ bomb (1957)

As public alarm over fallout escalated and Eisenhower began to seriously consider a test ban treaty, Lewis Strauss, Ernest Lawrence, and Edward Teller concocted a variation of the scientific narrative of fallout. They accepted its basic premise — that fallout was undesirable — but suggested the solution lay in continued testing. Their performances of expertise dangled before executive decision-makers, congressional committees, and the general public the prospect of a so-called ‘clean’ bomb which would destroy enemy targets while producing little to no radioactive debris. Concealed backstage were the numerous technical challenges to developing a clean bomb that would prove effective in battle.

¹¹⁴ Ibid.

¹¹⁵ Holifield, ‘Radiation Hazards in War and Peace’, 28 June 1957. *Congressional Record (House Proceedings)*, Volume 103, Part 8, pp. 10569-10573.

Eisenhower was momentarily seduced by the clean bomb narrative, which he referenced in press conferences to appease opponents of continued testing. It briefly confounded the American position at the UN disarmament negotiations underway in London, but failed to fundamentally change it. It also fed Eisenhower's growing disillusionment with Strauss, Lawrence, and Teller. He recognised that their advice flowed from their political aversion to a test ban agreement, rather than their knowledge of nuclear testing issues, and moved to establish alternative channels of scientific advice. This culminated in the formation of the President's Scientific Advisory Committee, whose involvement in the test ban debates is discussed in Sections 5 and 6.

Performance: backstage

Since the 1956 elections, the AEC had made 'clean' weapons a staple of its public relations campaign, and an urgent priority of its nuclear weapons development programme.¹¹⁶ For Strauss, Lawrence, and Teller, two developments in 1957 increased the importance of clean bombs in their campaign for unrestricted nuclear testing.¹¹⁷ The first was the mainstreaming of the scientific narrative of fallout, especially through Senator Holifield's congressional hearings. The second was Eisenhower's renewed determination to achieve a test ban agreement with the Soviet Union. After his election victory, Eisenhower overruled Strauss and other members of the NSC to make a test ban agreement an explicit foreign policy objective.¹¹⁸ In March 1957, he dispatched Harold Stassen to London to engage Soviet negotiators at the UN Disarmament Conference, instructing him to make 'tangible

¹¹⁶ Higuchi (2006), p. 92.

¹¹⁷ Another aspect of their strategy was to insist that a moratorium on testing should not be independent from a comprehensive disarmament agreement.

¹¹⁸ Greene (2007), p. 113.

concessions' to achieve a temporary agreement to suspend tests, even before an inspection system was installed.¹¹⁹

To 'clean up' nuclear weapons, scientists had to devise ways of reducing the amount of contaminating material — fission fragments, irradiating material, or both.¹²⁰ There were considerable technological hurdles to overcome, as methods of reducing or eliminating fission would significantly reduce the yield of the bomb while making it more expensive to deploy.¹²¹ The REDWING test series, conducted in the Marshall Islands from May to July 1956, experimented with weapon designs that would yield reduced amounts of fallout. When Lewis Strauss returned from the Eniwetok Proving Grounds, he declared REDWING a success: it had achieved 'maximum effect in the immediate area of a target with minimum widespread fallout hazard', and had proven 'much of importance not only from a military point of view but from a humanitarian aspect'.¹²² This concealed a more disappointing reality. The ZUNI shot on 28 May used a design by the Livermore laboratory. Although 80 percent of its yield came from fusion rather than fission, it detonated too close to the ground, blasting 'some 3 million cubic yards of vaporised rock and coral into the stratosphere', and scattering induced radioactive fallout over 17,000 square miles.¹²³ The NAVAJO shot was designed by the Los Alamos laboratory and detonated on 11 July. Although over 95 percent of its yield came from fusion, it had half the yield of its 'dirty' counterpart, making it less effective as a weapon.¹²⁴

¹¹⁹ Ibid. p. 115.

¹²⁰ Hansen (2007), Volume 1, p. 9.

¹²¹ Higuchi (2006), p. 91.

¹²² Quoted in Hewlett and Holl (1989), p. 347.

¹²³ Herken (2002), p. 308; Higuchi (2006), p. 94.

¹²⁴ Ibid.

Even if partially clean weapons could be developed, it would be some time before they would be militarily useful. According to the AEC's Director of Military Applications, General Alfred Starbird, clean weapons would not be stockpiled until April 1958 at the earliest, 'would be of limited yield for the weight involved', and could only be carried on two kinds of bombers, the B-52 and the B-36. The earliest a clean version of a large thermonuclear weapon could be designed was 1960, but it would take several more years before the entire stockpile was 'cleaned', costing \$175 million (approximately \$1.7 billion today). Ultimately, a clean 'tactical' weapon would only be developed in the early 1960s, based on 'very lucky breaks' in the PLUMBOB and HARDTACK test series, and would have limited uses.¹²⁵

Given these hurdles, it is no surprise that other nuclear scientists found the scientific narrative of clean weapons to be deeply misleading. As Hans Bethe put it in a letter to James Killian:

*In my opinion, complete cleanliness has no significance in military applications of nuclear weapons. The military application mostly contemplated is the use of a clean weapon in a ground burst against a hard enemy target, [in which case] the neutrons coming from the weapon will create radioactivity in the soil next to the weapon. This radioactivity will be carried up with the debris of the weapon itself and will cause fallout in the neighbourhood.*¹²⁶

Not only could clean weapons deployed in battle still cause fallout, but Harold Brown of Livermore's theoretical division, the person most qualified to comment on their development, was 'very sceptical' about whether 'completely clean' weapons could ever be manufactured.¹²⁷

¹²⁵ Quoted in Hansen (2007), Volume 4, pp. 369-370.

¹²⁶ Bethe, 'Memorandum for J. R. Killian Jr.: Clean Weapons', 17 April 1958. Eisenhower Presidential Library. My emphasis.

¹²⁷ Ibid.

Performance: front stage

Before the Joint Committee on Atomic Energy

As Chet Holifield's subcommittee turned the spotlight on the risks of radioactive fallout, congressional opponents of a test ban turned to scientists at the University of California at Berkeley to develop a compelling case for why continued testing was necessary. Whilst giving Senator Henry 'Scoop' Jackson a tour of the Livermore laboratory, Teller and Lawrence showed off their designs for smaller 'tactical' nuclear weapons, as well as 'clean' bombs, and emphasised 'just how deleterious a test ban would be for the laboratory'.¹²⁸ Jackson was 'sufficiently impressed' to invite them to testify before the Joint Committee on Atomic Energy's Subcommittee on Military Applications on 20 June.¹²⁹ The next day, the two scientists were asked to testify before the full JCAE. Transcripts of both sessions remain classified, so the following account of the scientists' testimony relies on the official history of the AEC by Richard Hewlett and Jack Holl.¹³⁰

Teller and Lawrence's performances of scientific expertise in these two sessions re-directed the narrative of fallout to justify continued testing. The US now knew how to make 'dirty' weapons of any size, Teller said, but further testing was needed to manufacture small 'clean' weapons. He warned that a hypothetical future attack on Vladivostok 'might result in the death of thousands of Japanese as fallout drifted eastward'. It was therefore crucial that the

¹²⁸ Goodchild (2004), p. 268.

¹²⁹ Ibid.

¹³⁰ The two hearings cited by Hewlett and Holl are the 'Hearings on Plutonium and Tritium Requirements' on 20 June 1957 and the 'Hearings on Technical Aspects of Inspection' on 21 June 1957. I have searched for records of these hearings in the Proquest Congressional Hearings Digital Collection, as well as the HathiTrust Digital Repository, but none were found. The description of the Records of the Atomic Energy Commission in the National Archives (Record Group 326) also do not mention these hearings. All other secondary literature that mentions these hearings refer to the account given in Hewlett and Holl. One can only assume that, as official historians of the Atomic Energy Commission, they were given access to the original material that otherwise remains classified to researchers.

US be able to develop ‘clean’ weapons that ‘limited their destruction to the immediate area of the target’. Lawrence echoed this: if testing stopped, ‘God forbid...we will have to use weapons that will kill 50 million people [through fallout] that need not have been killed’.¹³¹ While the undesirable future they painted was similar to that of the test ban supporters, the intervention they proposed to manage the risks of fallout was the exact opposite: more testing, not less.

Teller then briefly spoke as a defence expert, reinforcing his counter-narrative by describing the various ways in which the Soviets could engage in clandestine testing if a test ban were agreed. Audience members asked whether the Eisenhower administration knew about the importance of developing clean bombs, as well as these methods of evading detection. The second question placed Lawrence in an awkward position, as he was also a scientific advisor to Harold Stassen, who was in London negotiating the very test ban he was trying to subvert. Teller avoided embarrassing Lawrence by claiming that the discovery of these evasion techniques was relatively recent, so Stassen might not yet be aware of them.¹³²

Meeting with Eisenhower

Teller and Lawrence’s appearance before the JCAE created a further, pivotal, performance opportunity before the president himself. Representative Sterling Cole arranged for the scientists to meet privately with Eisenhower, and, on 24 June, Teller, Lawrence, Strauss, and Mark Mills, who directed the Livermore laboratory’s theoretical division, sat down with the president in the Oval Office. Their performance aimed to convince the president to continue testing because it was essential to the development of ‘clean’ weapons, as well as peaceful uses

¹³¹ Hewlett and Holl (1989), p. 399.

¹³² Ibid. p. 400.

of atomic energy. Strauss exercised directive dominance over this meeting, having spent the preceding weekend ensconced in a Washington hotel room preparing with Teller and Lawrence.¹³³

Teller and Lawrence exercised dramatic dominance. Lawrence opened the discussion by announcing that the Livermore laboratory had discovered how to make ‘virtually’ clean weapons, large and small, and failing to invest in their development would mean ‘dirty’ weapons would have to be used in wartime. Teller added that they had identified pure-fusion weapons which would cause damage only in the blast area, and produce no fallout. He predicted that this could be achieved in six to seven years, and America’s adoption of clean weapons would force the Soviets to follow suit. When Eisenhower asked whether he could say ‘that there would be no possible harm to humanity in general’ from further tests, he was told ‘this is essentially correct’. At this point, Teller relayed his so-called ‘Denver’ argument to de-risk fallout from testing, claiming that its impact on overall radiation levels was less than the difference between radioactivity in Denver, Colorado, and settlements that were closer to sea-level.¹³⁴

Discreet attempts to undercut the arms control negotiations underway in London were interwoven through the conversation. Mills said that research on the use of atomic explosions to generate power had identified a way to evade a test ban by concealing tests in deep cavities underground, while Teller maintained that a test ban agreement could not be accurately policed. Finally, Teller took the opportunity to defang a petition against nuclear testing by the chemist Linus Pauling. He commented that there were ‘5,000 scientists on the Berkeley Campus and only 27 of them signed this statement’, which included no biologists or

¹³³ Herken (2002), p. 313.

¹³⁴ Goodpaster, ‘Memorandum of Conference with the President’, 24 June 1957. DDRS.

physicists.¹³⁵ Strauss's subordinate, Captain John Morse, later congratulated Lawrence on their 'performance': 'The situation called for overselling rather than under-selling', Morse wrote, 'particularly when a simple statement could not possibly cover all the complexities involved'.¹³⁶

Political effects

Eisenhower's reaction and presidential rhetoric

Eisenhower's immediate reaction to Teller, Lawrence, and Mills' performance of expertise was ambivalent. 'No one could oppose the development they had described', he said of clean bombs, but American and world opinion was divided on testing, and the US could not 'permit itself to be crucified on a cross of atoms'.¹³⁷ After being reassured, disingenuously, by Teller and Lawrence that continued testing posed no general risk to humanity, the president proposed to justify testing in his next press conference on the basis that they would 'clean up weapons and thus protect civilians in event of war'.¹³⁸ The following day, he told Secretary Dulles that 'the real peaceful use of atomic energy' depended on the development of clean weapons in the next four to five years.¹³⁹

Eisenhower explicitly referenced 'clean' bombs at his next press conference. To quell public anxiety over continued testing, he inflated the already-exaggerated claims of Teller and Lawrence, who 'tell me that already they are producing bombs that have 96 percent less fallout than was the case in our original ones, or what they call dirty bombs', and could

¹³⁵ Ibid.

¹³⁶ Letter from Captain John Morse to Ernest Lawrence dated 2 July 1957, reprinted in Hansen (2007), Volume 4, p. 287.

¹³⁷ Goodpaster, 'Memorandum of Conference with the President', 24 June 1957. DDRS.

¹³⁸ Ibid.

¹³⁹ Goodchild (2004), p. 270.

produce an ‘absolutely clean bomb’ in four to five years. Thereafter nuclear weapons would become ‘completely military in its application’: ‘you will have an effect only so far as its blast and heat waves reach, and there will be no fallout to injure any civilian or any innocent bystanders that are off X miles’. He also repeated their argument about the necessity of testing in order to obtain ‘the full value out of the atomic science in peaceful development’.¹⁴⁰ This framing of nuclear tests contrasted sharply with a press conference earlier in the month, in which he emphasised his preference for ‘a total and complete ban of all testing, based upon total disarmament in this field’.¹⁴¹

Continued testing and the disarmament talks

The seductive appeal of ‘clean’ bombs briefly confounded the US position at the UN disarmament talks. Cabling back to Department of State from London, Dulles asked for clarity about whether a test suspension could be negotiated independently of a cut-off in the production of new fissionable material, remarking that ‘when I last spoke to the president it was following the presentation by Lawrence and Teller and the president then seemed to question the wisdom of any suspension of testing’.¹⁴² However, this failed to have a lasting impact on the talks: within a month, Eisenhower was urging his representatives to demonstrate greater flexibility in discussions in order to move forward on an agreement with the Soviets.¹⁴³

The president’s growing frustration with the scientific advice he nonetheless continued to rely on was evident in internal discussions over the 1958 HARDTACK test series. In late July,

¹⁴⁰ ‘The President’s News Conference’, 26 June 1957. TAPP.

¹⁴¹ ‘The President’s News Conference’, 5 June 1957. TAPP.

¹⁴² Dulles, ‘Telegram from the Secretary of State to the Department of State’, 29 July 1957. FRUS.

¹⁴³ Greene (2007), pp. 121-122.

Strauss, Dulles and Secretary of Defense Charles Wilson proposed that a large clean bomb be included in HARDTACK, arguing that ‘if we substituted very high yield “clean” weapons...we could decrease the over-all intensity of fall-out in adjacent areas...employed, and by a factor of 30 with air bursts’.¹⁴⁴ Eisenhower challenged the desirability of testing larger bombs, questioned whether a large clean bomb was even needed in the first place, and expressed a strong preference for ‘curtailing’ the testing and the quantity of test shots. In the end, he approved HARDTACK, but lamented that ‘our statecraft was becoming too much a prisoner of our scientists’.¹⁴⁵

Eisenhower’s opinion that Strauss, Lawrence and Teller had overstepped the boundaries of their roles as scientific advisors hardened in response to Strauss’s efforts to frustrate the arms control negotiations in London. Strauss insisted that testing restrictions be linked to a broader disarmament agreement (the ‘inflexibility concept’), knowing that this would be more difficult to broker, and shaped the instructions cabled to negotiators in London, including Dulles and Stassen, to this effect.¹⁴⁶ Commenting on one such attempt, Eisenhower admitted to being ‘somewhat disturbed by the fact that the scientists today in this field seemed to be running the Government rather than acting as servants for the Government’.¹⁴⁷ Still, he did not challenge Strauss’s proposed amendments. Arms control negotiations stalled in late 1957. As Strauss had hoped, Western negotiators demanded that a test ban be linked to a cut-off in the

¹⁴⁴ Dulles et al., ‘Report to the President from the Secretary of State, the Secretary of Defense, and the Chairman, Atomic Energy Commission’, 26 July 1957. *FRUS*.

¹⁴⁵ Cutler, ‘Memorandum of a Conference, White House, Washington’, 9 August 1957. *FRUS*.

¹⁴⁶ Greene (2007), p. 119-121.

¹⁴⁷ Herter, ‘Memorandum of a Conversation Between the President and the Acting Secretary of State’, 30 July 1957. *FRUS*.

production of fissionable materials, ‘whereas the Soviets wanted all nuclear weapons to be destroyed first’.¹⁴⁸

5. PSAC, Part 1: the Bethe Panel (1957-1958)

American presumptions of technological superiority over the Soviet Union were shattered by the launch of the Sputnik satellite on 4 October 1957. The rocket which sent Sputnik into orbit could also be used to deliver an intercontinental ballistic missile (ICBM) — a fact not lost on policymakers or the public. Nuclear parity between the superpowers now loomed on the horizon. Legislators, pundits, and scientists speculated that America was losing the arms race, a fear that presidential hopeful Kennedy would later refer to as the ‘missile gap’.¹⁴⁹ This fear was amplified by the Gaither Committee’s report, which was leaked to the press that November. It found that the Soviet Union posed ‘an increasing threat which may become critical in 1959 or early 1960’, and that America was woefully unprepared if it launched a ‘surprise’ nuclear attack.¹⁵⁰

In this climate, Eisenhower created the President’s Scientific Advisory Committee (PSAC), a move which brought nuclear scientists into the heart of executive decision-making. The impact of PSAC’s performances of defence expertise on the Eisenhower administration’s approach to restricting nuclear testing was both subtle and profound. This section examines the founding of PSAC and its first foray into the nuclear testing debates, which came in the form of an interagency panel led by Hans Bethe. It considered the technical feasibility of a test ban agreement, but not if it was in America’s interests to pursue one. The ensuing report

¹⁴⁸ Wang (2008), p. 121.

¹⁴⁹ See Preble (2003).

¹⁵⁰ ‘NSC 5724: Report to the President by the Security Resources Panel of the ODM Science Advisory Committee on Deterrence and Survival in the Nuclear Age’, 7 November 1957. *FRUS*.

was used as an artefact in an in-person performance of expertise by Bethe before the National Security Council. In Section 6, I trace how PSAC leveraged the success of the Bethe Panel to expand the scope of its authority and deliver a decisive recommendation in favour of a test ban. That performance of expertise is notable because it did not dramatise the risk of fallout, but instead highlighted how negotiating a test ban immediately after the HARDTACK test series would freeze American advantages in nuclear warheads capabilities, while buying time to develop its own ICBM system.

Two factors enabled PSAC to pursue this strategy. The first relates to the stage of the decision-making process. Eisenhower and Dulles had already expressed a clear preference to initiate test ban negotiations in order to allay public fears about the risks of fallout and make progress towards comprehensive disarmament. However, they required assurance that doing so would not be detrimental to overall national security by leaving the US more vulnerable to the Soviet threat. This was the main argument against a treaty levied by the Atomic Energy Commission and the Department of Defence. The second relates to nuclear scientists' dual role as defence experts and scientific experts. Given Eisenhower and Dulles' concerns, it was strategically advantageous for PSAC members to speak as the former. By reassuring Eisenhower and Dulles that a test ban treaty could be adequately monitored, and that it would leave America militarily advantaged, they established congruence between negotiating a treaty and preserving national security.

Historical background

Sputnik convinced Eisenhower that nuclear warfare was absurd. Given that both sides would soon possess ICBM arsenals capable of inflicting immense damage, any war would end in

mutual annihilation.¹⁵¹ It also led him and Dulles to reconsider the role of nuclear weapons in American grand strategy. The doctrine of massive retaliation held that the best way to guarantee American national security was to credibly threaten nuclear retaliation against any act of aggression by the Soviet Union.¹⁵² Already a source of much debate within the Eisenhower administration, this doctrine now seemed increasingly untenable.¹⁵³ Not only were the Soviets capable of responding in kind, widespread acceptance of the scientific narrative of fallout meant that any use of a nuclear weapon would generate international outcry, jeopardising America's international reputation and its alliances.

As Zuoyue Wang observes, Sputnik is often given as the impetus for PSAC's creation, as well as its upgrade to the White House, but this does not explain why Eisenhower overlooked scientists such as Ernest Lawrence and Edward Teller, with whom he was more familiar.¹⁵⁴ This was largely due to Isidor Rabi's influence as chair of the Office of Defence Mobilisation's Science Advisory Committee (ODM-SAC). Rabi, a retired physicist, was a good friend of the president. At one of the Committee's meetings with Eisenhower, he remarked that 'many of the policy matters that come up to the President have a strong scientific component', and recommended that he appoint a dedicated scientific advisor.¹⁵⁵ In November 1957, Eisenhower created PSAC out of the ODM-SAC. He appointed James Killian, the president of MIT, as his first Special Assistant for Science and Technology. Killian had considerable social and cultural capital: he was known to senior policymakers from his work on the

¹⁵¹ Craig (1998), Chapter 5.

¹⁵² For the origins of this doctrine, see Wells (1981).

¹⁵³ See Rosenberg (1983) and Brands (1989) for historical accounts of the debates over the doctrine of massive retaliation among Eisenhower administration officials, and how they translated this doctrine into political practice.

¹⁵⁴ Wang (2008), p. 74.

¹⁵⁵ Ibid. p. 76.

Technological Capabilities Panel and other government advisory committees, and was highly regarded as an able administrator of scientists. He was granted access to NSC and cabinet meetings, as well as ‘all plans, programmes, and activities involving science and technology in the Government, including the Department of Defence, AEC, and the CIA’.¹⁵⁶ Many of PSAC’s other members were nuclear scientists, including Rabi, Herbert York, Lloyd Berkner, and George Kistiakowsky.

Performance: backstage

In his memoirs, Killian recalls being ‘acutely aware that scientific and political judgements were intertwined and could not be treated separately’.¹⁵⁷ But the impact of PSAC hinged, in part, on its ability to uphold that distinction in performances of expertise before senior policymakers. Even though they both desired progress on arms control, Killian distanced himself from Harold Stassen, whose capricious behaviour in London had eroded his social capital.¹⁵⁸ In December 1957, he politely declined to support Stassen’s quest for a test ban, saying that ‘the competence and experience’ within PSAC ‘probably are not such as to enable us to assist you effectively in this area’.¹⁵⁹

Killian took care to ‘set the stage’ for PSAC’s venture into ‘the thicket of the test ban’.¹⁶⁰ His moment came at a fraught NSC meeting in January 1958 to discuss Stassen’s latest disarmament plan, which included a two-year suspension on nuclear testing. Strauss argued

¹⁵⁶ Killian (1977), p. 275.

¹⁵⁷ Ibid. p. 154.

¹⁵⁸ Stassen’s eagerness to make progress in London proved to be his downfall. He committed a fatal blunder by sending the lead Soviet negotiator an informal memorandum detailing the US’s disarmament policy before clearing it with America’s allies. Greene (2007), pp. 116–118.

¹⁵⁹ Wang (2008), p. 121; Killian, ‘Letter to Harold Stassen’, 26 December 1957. Eisenhower Presidential Library.

¹⁶⁰ Killian (1977), p. 150.

that this would impede the development of clean bombs as well as the ‘peaceful uses of hydrogen explosives’. Citing ‘Dr. Teller and Dr. Lawrence’, he also stated that many more inspection stations were needed to detect clandestine nuclear testing by the Soviet Union than the eight or twelve proposed by Stassen. Dulles and Eisenhower also jettisoned Stassen’s recommendations for different reasons. Referring to Teller and Rabi, Eisenhower went on to express ‘great concern about the difference of views of the experts in this field’. Furthermore, it was impossible to make new proposals without a consensus among ‘our allies or even among ourselves’.¹⁶¹ Using the disunity among senior scientists as a wedge, Killian interrupted from the backbenches to suggest that the US ‘should not proceed with additional proposals for nuclear test suspensions without up-to-date technical appraisals made in advance by the most highly-qualified U.S. scientific and technical personnel’.¹⁶²

With Eisenhower and Dulles’ backing, Killian and the Special Assistant for NSC Affairs, Robert Cutler, formed an Ad Hoc Panel on Nuclear Test Limitation.¹⁶³ Its chair, Hans Bethe, was a PSAC member and a nuclear physicist who had led the prestigious theoretical division at the Los Alamos laboratory during World War II and played an important role in the invention of the hydrogen bomb. He also chaired the Air Force panel responsible for gathering and analysing data on Soviet nuclear tests.¹⁶⁴ The Bethe Panel was to consider three questions: whether the US was capable of detecting nuclear tests by the Soviet Union, the

¹⁶¹ Gleason, ‘Memorandum of Discussion at the 350th Meeting of the National Security Council’, 6 January 1958. *FRUS*.

¹⁶² *Ibid.*; Killian (1977), p. 154.

¹⁶³ *Ibid.*

¹⁶⁴ Wang (2008), p. 122.

‘comparative nuclear strengths’ of the superpowers, and the impact of a test cessation on activities on the weapons laboratories at Livermore and Los Alamos.¹⁶⁵

Bethe’s co-panelists came from the AEC, Livermore, Los Alamos, the Pentagon, the Air Force, and the CIA. Unsurprisingly, most of them believed that a test ban would weaken American national security, and aired these views in the panel’s meetings as well as after the report was shared with the NSC in April.¹⁶⁶ For example, the Department of Defence and the Joint Chiefs of Staff formally submitted their views on a test ban to Bethe in mid-March. Discontinuing testing after the HARDTACK series would result ‘at the very least, in a technological parity in nuclear weapons development between the two countries’, with the USSR’s efforts bolstered through espionage, ‘devising partial substitutes for testing’, and clandestine testing. The USSR’s ‘rapidly increasing capacity for producing weapons materials’ meant that its stockpile would match that of the United States’ by the mid-1960s. Given the USSR’s ‘willingness to assume the military initiative’ in a crisis, the deterrent capability of the US’s long- and medium-range missile systems required continuous improvement. Overall, they concluded, a test cessation ‘will operate to the distinct disadvantage of the United States’.¹⁶⁷

Effective stage management by Bethe meant that these opinions were excluded from the report itself. A thinly-disguised complaint by Assistant Secretary of Defence, Donald Quarles, to Cutler reveals Bethe’s strategy: ‘The Chairman of the Panel...informs me that the views expressed [in the Defence and JCS memorandums] relate...to matters outside the scope of

¹⁶⁵ Killian (1977), p. 155.

¹⁶⁶ Wang (2008), pp. 122-123.

¹⁶⁷ Quarles, ‘Memorandum for the Chairman, Ad Hoc Panel on Nuclear Test Cessation’, 21 March 1958; Taylor, ‘Memorandum for the Secretary of Defence’, 13 March 1958. Both in Eisenhower Presidential Library.

the technical studies made by the Panel, and, therefore...these views have not been considered by the Panel and will not be appended to the report as originally contemplated'.¹⁶⁸ As chair, Bethe interpreted the panel's assignment in the narrowest possible way — as a technical appraisal about whether a test ban *could* be pursued — to conceal disagreements about whether it *should* be pursued from the audience. In this way, he was able to shape the panel's deliberations over the final report. For example, he and the other attendees reprimanded Herbert Loper, another Assistant Secretary of Defence, for asking 'non-technical' questions about whether a test ban would achieve peace. When Harold Brown, a Livermore scientist, argued that a test ban would inhibit the US's defence and retaliatory systems, 'perhaps to a fatal degree', Bethe snapped: 'Yes, but if [a test ban also inhibits] the Russian defence system you say this of no account. This is not a technical point. It is a judgement which I think is based on one particular type of danger and only one'. The others agreed, and Brown backed down.¹⁶⁹ No trace of these objections appeared in the final report. What Bethe achieved was, as Killian later surmised, 'astonishing': a panel dominated by vocal opponents of a test ban unanimously endorsing a system of enforcing it.¹⁷⁰ Having temporarily settled the debate over technical feasibility, it was far easier for PSAC to set the terms of the next one: whether a test ban was in the national interest.

Performance: front stage

The key findings of the Ad Hoc Panel were circulated in late March 1958; Bethe formally delivered its report to the NSC in early April, assuming dramatic dominance in this

¹⁶⁸ Quarles, 'Memorandum for the Special Assistant to the President for NSC Affairs', 1 April 1958. Eisenhower Presidential Library.

¹⁶⁹ 'Meeting of the Ad Hoc Panel on Nuclear Test Limitation', 15 March 1958. DDRS.

¹⁷⁰ Killian (1977), p. 156.

performance of expertise. Before Bethe spoke, Killian engaged in boundary maintenance by reminding the audience that Bethe's group had 'limited themselves to technical factors' and 'excluded from their consideration any questions of policy with respect to whether there should be a cessation of tests or other agreements'.¹⁷¹ Their conclusions were straightforward. First, a detection system 'adequate for safeguarding a nuclear test limitation agreement' could be designed to detect and identify nuclear explosions in the USSR and China 'except for some underground tests of small size'. It required the installation of seventy observation stations, granting mobile teams immediate access to areas suspected of having hosted underground testing, and the right to fly occasionally over parts of the USSR and China. An additional thirty stations and 'extensive air sampling coverage of the entire world' would greatly enhance the existing Long Range Detection System for tests held in remote locations. Two appendices detailed the surface, low and high altitude, and underground tests such a system could detect. According to the panel, this system would prevent the USSR from improving its nuclear weapons capabilities through testing, except for small yields, 'without running a great risk of being detected'.¹⁷²

Second, it assessed the present state of each superpower's nuclear warheads stockpile, but explicitly avoided commenting on 'the military effects that would flow from the stoppage of further weapons tests'. In 1958, the US would outstrip the USSR in nearly all weight classes of warheads, but would not have 'reached ultimate performance'. If testing continued indefinitely, the two countries would achieve 'comparable capability in each weight class...differing only in relative time of accomplishment'. The implication was clear: in terms

¹⁷¹ This quote is taken from a letter Killian wrote to President Eisenhower, dated the same day as the NSC meeting. Killian also made a nearly identical statement at the meeting itself. Killian, 'Letter to Dwight D. Eisenhower', 3 April 1958. Eisenhower Presidential Library.

¹⁷² 'Report of the National Security Council Ad Hoc Working Group on the Technical Feasibility of a Cessation of Nuclear Testing', n.d. *FRUS*.

of nuclear warhead capabilities, the US would be in a more advantageous position the sooner a test ban was reached. At the same time, a ban would not end the arms race, as each superpower could continue to improve its delivery systems capabilities to compensate for 'the lack of optimal development in warheads'.¹⁷³

Political effects

Days before Bethe presented the panel's findings to the NSC, American officials learned that the Soviets planned to declare a unilateral test moratorium that would last as long as other countries refrained from testing. The announcement came on 31 March, just after the USSR's latest round of tests, but before the **HARDTACK** series was scheduled to begin. It gave the Soviet Union an 'immediate excuse to resume testing while drawing a negative public response to the United States for rejecting the Soviet proposal'.¹⁷⁴ Dulles, ever sensitive to 'world public opinion', suggested that Eisenhower announce he would authorise no further tests while in office. Although Eisenhower was inclined to agree, Dulles retracted his suggestion after being confronted by Quarles and Strauss. Quarles claimed that suspending testing would leave the US 'at a substantial net disadvantage', while Strauss stated that 'testing does not result in any significant health hazard', and that the 'real hazard today is nuclear war, which our weapons development helps to prevent'. Eisenhower ended the meeting by asking those present 'to think about what could be done to get rid of the terrible impasse in which we now find ourselves with regard to disarmament'.¹⁷⁵

¹⁷³ Ibid.

¹⁷⁴ The public announcement took place on 31 March 1958, but CIA officials begin warning of this in January. Greene (2007), pp. 142-144.

¹⁷⁵ Goodpaster, 'Memorandum of Conference with the President', 24 March 1958. *FRUS*.

A week later, with Killian's support, Bethe's performance of expertise provided a route out of that impasse. Killian and Bethe could not control the NSC's conversation entirely, as Assistant Secretary Quarles rose to give the opinion of the Department of Defense (DOD) and the Joint Chiefs of Staff (JCS) that a test ban would compromise national security. However, as the DOD/JCS stance was already widely known, preventing them from influencing the panel's report allowed Killian and Bethe to create the impression of a broad consensus at a technical level. One important effect of this performance was to create room for Eisenhower and Dulles to pursue their favoured policy agenda. In a decisive break with Strauss, both men accepted that a foolproof monitoring system was not necessary to deter Soviet violations of a test ban treaty. In fact, they were prepared to accept a less intrusive monitoring system than Bethe had proposed — one with only a 50-50 chance of detecting a clandestine test — believing this was a sufficient deterrent.¹⁷⁶ At a press conference the next week, Eisenhower stated he would consider 'very seriously' a unilateral moratorium on testing after *HARDTACK*, provided he received 'satisfactory' scientific reports. There was no mention of conditioning a test suspension on a broader disarmament agreement.¹⁷⁷

The other major effect of this performance was to accrue PSAC considerable social and cultural capital, and expand the scope of their authority over the nuclear testing debates within the administration. The respect Killian and Bethe showed for the boundary between defence expertise and policymaking contrasted favourably with the Strauss-Teller-Lawrence group, who openly breached it in order to drum up opposition to a test ban. Teller took to the airwaves, calling Sputnik's launch a greater defeat for the United States than Pearl Harbour, prompting Eisenhower to complain about the scientists who 'tried to be experts in

¹⁷⁶ 'Memorandum of Discussion at the 361st Meeting of the National Security Council', 3 April 1958. *FRUS*.

¹⁷⁷ 'The President's News Conference', 9 April 1958. TAPP.

political and military matters'.¹⁷⁸ Strauss, meanwhile, pounced on every opportunity to rail internally against a test ban, earning him the occasional sharp rebuke from the president. His influence was waning: previously, he had been included in every discussion and decision regarding nuclear testing; this time, the general public learnt about Eisenhower's willingness to consider a unilateral suspension before he did.¹⁷⁹ The arrival of PSAC and the inclusion of Killian in national security meetings meant that Strauss no longer controlled the flow of information to senior decision-makers. Nor could he conceal that his, Teller, and Lawrence's views on testing did not represent the majority opinion of the scientific community. In the past, Eisenhower might have looked to Strauss to evaluate the Ad Hoc Panel's findings. Now, he asked PSAC to independently evaluate the feasibility of monitoring a test ban.¹⁸⁰

6. PSAC, Part 2: the Killian Report (1958)

Performance: backstage

For three days in early April, PSAC sequestered themselves at Ramey Air Force Base in Puerto Rico to produce a report on the cessation of nuclear testing. This time, there were no government officials present this time. Unlike the Ad Hoc Panel, no transcript of these meetings is available, so it is not possible to reconstruct the backstage machinations leading up to the committee's final report. A few facts can be gleaned from the meeting notes and memoirs of the attendees. There was general agreement that suspending nuclear testing after HARDTACK, but before any further Soviet tests, would be advantageous to the United

¹⁷⁸ 'Telephone call with Admiral Strauss', 25 November 1957. *The Diaries of Dwight D. Eisenhower, 1953-1961*.

¹⁷⁹ Hewlett and Holl (1989), p. 479.

¹⁸⁰ Greene (2007), p. 146.

States, and that any test cessation agreement should be pursued independently of a ‘comprehensive limitation of armaments’.¹⁸¹

As PSAC’s members voted on whether it should submit these recommendations to the president, a disagreement erupted between Herbert York, the ex-director of the Livermore laboratory, and the others. York questioned whether scientists ought to be giving advice on what he considered a ‘political problem’.¹⁸² As he later wrote to Killian: ‘it was the scientist’s job to discover what the technological possibilities inherent in nature were, and the politician’s job to decide what to do with them... I felt that some sort of state department group should be doing what we were trying to do’.¹⁸³ Jerome Wiesner, a professor of electrical engineering, changed York’s mind by pointing out that ‘there was no other group as well positioned to make the decision for the country’: ‘whether or not a science oriented group was the ideal forum, it was the only forum that had any chance of doing the right thing’.¹⁸⁴

Performance: front stage

PSAC’s final report, also known as the Killian Report, was positioned as a summary of the ‘technical factors’ it considered ‘central in any decision relating to the cessation of nuclear tests’, but offered its audience little in the way of new technical insights. After endorsing the Bethe Panel’s proposed monitoring system, the report expanded on how a test ban would ‘leave the U.S. in a position of technical superiority for at least several years, a position which could not otherwise be maintained’. After HARDTACK, the US would ‘possess a tested series

¹⁸¹ Beckler, ‘Record of Action, President’s Scientific Advisory Committee Meeting April 8, 9 10, 1958’, 8-10 April 1958. *Papers of the President’s Scientific Advisory Committee, 1957-1961*; Killian (1977), p. 156.

¹⁸² Wiesner (2003), p. 263.

¹⁸³ Killian (1977), p. 157.

¹⁸⁴ The first quote is from Wiesner (2003), p. 263; second quote is from a letter from York to Killian in Killian (1977), p. 157.

of nuclear warhead prototypes covering a very wide range of application, and probably with superior performance in all categories compared to the USSR'. While technical superiority 'did not necessarily imply military superiority', a test ban would restrict the USSR's military capabilities in the short term, as it 'could less well afford than we any nuclear weapons which are expensive in fissionable material'. Additionally, the Soviet Union's ICBM system was judged to be imminently operational, leaving it free to announce a missile test cessation for propaganda purposes, whereas the US needed until mid-1959 to reach an equivalent position. Expediting a test ban agreement would leave room for the US to continue developing its own ICBM system without attracting international criticism.¹⁸⁵

Backstage, PSAC members admitted that they had ventured into the realm of policymaking, but, in each interaction with policymakers, they practiced boundary maintenance by stressing that their assessment was limited to 'technical factors'. And, although individual PSAC members were troubled by the hazards of fallout and by the prospect of an unending arms race, they did not ground their performance of expertise in either. Instead, they adopted the AEC/DOD's framing of nuclear weapons as the primary means of deterring the Soviet threat. They then showed how, from a technical standpoint, a test ban agreement would guarantee that deterrent remained viable, while continued testing would not. Eisenhower and Dulles were already inclined to seek a treaty with the USSR, but were unwilling to act without an effective response to the AEC/DOD challenge that a treaty would compromise US national security. PSAC's performance aimed to provide this response. Basing the report on the scientific narrative of fallout would have given Strauss the opportunity to insert his appropriation of that narrative, namely that further testing was needed to develop 'clean'

¹⁸⁵ 'Some Technical Considerations and Their Implications Relating to the Cessation of Nuclear Tests', 11 April 1958. DDARS.

weapons. Basing the report on the need to achieve disarmament, meanwhile, would have permitted Strauss to insist that a test ban be linked to a broader disarmament agreement, which would be more difficult to negotiate. Mentioning neither deprived him and his allies in the Department of Defense of the opportunity to deploy these two counterclaims.

This strategy played out in real time during a meeting of disarmament advisors convened by Dulles. When the discussion turned to PSAC's report, Strauss protested that the nuclear test matter was a 'false issue', and a freeze on testing would advantage the Soviet Union. Killian reminded him that Strauss and Quarles had earlier backed the Bethe Panel's conclusion that the US would lead in nuclear warhead development after the HARDTACK series. When Strauss claimed that America lacked an adequate anti-missile defence system, Killian agreed, but observed that 'it is the complicated electronic elements that constitute the problem rather than the nuclear warheads, which we [would] have after HARDTACK'. Killian then refuted Strauss's 'clean' weapons narrative. Strauss claimed that further testing was needed to develop 'clean' missiles for a defensive system. Furthermore, his medical advisors considered that 'too many airbursts' from the NIKE-ZEUS anti-ballistic missile system would pose a health hazard. Killian retorted that 'cleanliness' was irrelevant given the altitude at which these missiles would be detonated. PSAC found that 'even if all the warheads for estimated anti-ICBM requirements were fired, the danger point in radiation would not be reached'. In general, he surmised, PSAC 'felt that it was valid to question the need for five more years of testing in order to make marginal improvements and to clean up these weapons'.¹⁸⁶

¹⁸⁶ 'Memorandum of Conversation: Meeting with Disarmament Advisors', 28 April 1958. Eisenhower Presidential Library.

Political effects

The Conference of Experts and the unilateral test moratorium

PSAC's performance of expertise paved the way for Eisenhower and Dulles to take the first concrete steps towards a test ban. Killian met privately with Strauss, Eisenhower, and Dulles to share PSAC's recommendations. While Strauss tried unsuccessfully to pick apart the report, Eisenhower and Dulles welcomed its findings. The president added that 'he had never been too much impressed, or completely convinced by the views expressed by Drs. Teller, Lawrence and Mills that we must continue testing of nuclear weapons'.¹⁸⁷

Events progressed quickly from there: three days after meeting Killian, Dulles drafted a letter for Eisenhower to send to Khrushchev, proposing that an international group of nuclear scientists meet in Geneva to assess the technical feasibility of monitoring a test ban agreement. In a break with protocol, no one in the AEC or the Department of Defence was notified of this overture until Khrushchev replied to Eisenhower in early May, agreeing to commence talks.¹⁸⁸ By undermining the narrative that continued testing was an essential part of America's defence against the Soviet threat, the Killian Report empowered Eisenhower and Dulles to act without achieving a consensus among — or even informing — their top advisors.

PSAC amassed further social and cultural capital from these two successful performances of expertise, enabling them to play an influential role in the negotiations. Shortly after, Lloyd Berkner led a panel to explore a seismic detection programme, while James Fisk and Robert Bacher represented PSAC on the American delegation to Geneva. In August 1958, this

¹⁸⁷ Goodpaster, 'Memorandum of Conference with the President', 17 April 1958. MIT Institute Archives. Benjamin Greene argues that this statement downplayed the earlier influence these men and Strauss had over Eisenhower's views. Greene (2007), p. 149. See also Dulles, 'Letter to Dr. Killian', 2 May 1958. Eisenhower Presidential Library.

¹⁸⁸ Wang (2008), pp. 126-127.

Conference of Experts, attended by scientists from Western and Soviet bloc countries, concluded that a ‘workable and effective control system for the detection of violations of a possible agreement on the worldwide cessation of nuclear tests’ was viable.¹⁸⁹ The system they endorsed was based on the findings of the Bethe Panel. On 22 August, Eisenhower announced a year-long suspension of testing to coincide with the start of test ban negotiations at Geneva.¹⁹⁰ This announcement made no mention of fallout, not because it was irrelevant, but because the topic was so ‘politically explosive’ that policymakers feared citing it as a reason would make the resumption of testing all but impossible.¹⁹¹

The test ban negotiations, October 1958 to May 1960

This was the closest the American government had ever gone towards restricting nuclear testing, and it was a direct consequence of PSAC’s performances of defence expertise. The group’s initial triumph, however, did not carry over into the test ban negotiations, which ran from October 1958 to May 1960. Eisenhower remained committed to achieving some form of test ban agreement throughout this time, and extended the moratorium for another year. While his resolve was strengthened in late 1959 by a new appreciation of the risks fallout posed to the biosphere, his government wavered between pursuing a comprehensive test ban, one limited to atmospheric testing, and one restricted to tests above a certain threshold.¹⁹²

As negotiations started in November 1958, new seismic data from the HARDTACK II test series revealed that the system agreed at Geneva earlier in the summer failed to distinguish minor underground tests of less than five kilotons from earthquakes.¹⁹³ This could only be

¹⁸⁹ Seaborg (1981), p. 23.

¹⁹⁰ Greene (2007), p. 162.

¹⁹¹ Higuchi (2018), p. 118.

¹⁹² Ibid. p. 184.

¹⁹³ Greene (2007), p. 171.

remedied by a substantially more invasive programme of inspections and control posts than was previously tabled, which American officials expected their Soviet counterparts to reject. Consequently, some advocates of a test ban, including James Killian, moderated their support for a comprehensive agreement.¹⁹⁴

By then, John McCone had replaced Strauss as chairman of the AEC. He remained in close contact with Strauss, and shared his views on testing. McCone and the Department of Defence leveraged the data from HARDTACK II to recommend a limited ban on atmospheric tests as the only realistic path forward. To justify this, they repeatedly drew on the notion of ‘seismic decoupling’, also known as the Latter hole theory. Developed by Albert Latter of the RAND Corporation and Edward Teller, this theory postulated that ‘nuclear devices detonated in large spherical cavities deep underground would emit a much smaller seismic signal, masking the true size of the test’.¹⁹⁵ This implied that a comprehensive test ban could not be adequately policed to ensure Soviet compliance. As it was assumed that the Soviets would engage in clandestine testing if they thought they could escape detection, they argued a comprehensive test ban would unacceptably compromise national security.

Eisenhower initially rejected the AEC/DOD proposal for an atmospheric test ban. Only when James Killian reluctantly endorsed it in June 1959 did the president agree to change the US’s negotiating position. Killian’s successor, George Kistiakowsky, found ‘the notion of evasion through Latter holes completely nonsensical’, and worked feverishly to revive support for a comprehensive ban.¹⁹⁶ These efforts were partially successful, and, in October, the US

¹⁹⁴ PSAC issued a public statement saying that ‘these studies and new data indicate that it is more difficult to identify underground explosions than had previously been believed’. Quoted in Killian (1977), p. 301.

¹⁹⁵ Greene (2007), p. 182. Lloyd Berkner’s panel on seismic improvement, which reviewed the data from HARDTACK, acknowledged that seismic decoupling was theoretical possibility, which added to the force of Teller and Latter’s argument. See *ibid.* p. 183.

¹⁹⁶ *Ibid.* p. 191.

negotiating position changed yet again. It now aimed for a ‘phased’ treaty: one that began with a ban on tests in the atmosphere and outer space, which would extend underground once a mutually acceptable monitoring system could be agreed. Unfortunately, such an agreement proved elusive, as the technical discussions between Soviet and American scientists in Geneva shortly thereafter dissolved into acrimony, with the Soviets refusing to entertain any modifications to the original system.¹⁹⁷

Eisenhower bitterly regretted his failure to secure a test ban during his presidency. Ultimately, this was due to factors beyond his control. Between 1958 and 1960, Soviet and US negotiating positions changed at times, and in ways, that resulted in the talks stalling for lengthy periods. The US position was confounded by bureaucratic opposition from the AEC and Department of Defence as well as growing legislative opposition to a test ban.¹⁹⁸ Edward Teller’s performances of expertise contributed to both: before Pentagon officials and then at JCAE hearings, he invoked the theory of seismic decoupling to argue that Soviets could disguise large underground tests as ones that were much smaller.¹⁹⁹ When wedded to the trope of inherent Soviet untrustworthiness, it was easy for him to conflate capability with intention: if the Soviets *could* violate any test ban agreement, they inevitably would.²⁰⁰

Despite Teller’s meddling, the Eisenhower administration ploughed ahead with negotiations. In 1960, the US tabled a ‘threshold’ ban that would outlaw tests in the atmosphere, outer space, and underground ‘down to a threshold commensurate with the level of on-site

¹⁹⁷ Seaborg (1981), pp. 20-21; Greene (2007), pp. 190-198.

¹⁹⁸ See Smith-Norris (2003).

¹⁹⁹ Killian (1977), pp. 166-167; Greene (2007), p. 167. As Albert Latter himself told Killian: ‘whatever advances might be made in detection technology, the West Coast group led by Teller would find a technical way to circumvent or discredit them’. Quoted in Killian (1977), p. 168.

²⁰⁰ Robinson (2016), pp. 100-102.

inspection that the Soviet Union agreed upon', which was 4.75 kilotons.²⁰¹ Whether or not an agreement would otherwise have been achieved will never be known: the great power summit held in Paris to debate this proposal that May collapsed when an American U-2 spy plane was shot down in Soviet airspace. This occurred as relations between the superpowers deteriorated more generally, and prompted Khrushchev to withdraw from the negotiations in a fury.²⁰²

7. The PTBT ratification hearings (1963)

Negotiations over a test ban agreement resumed in March 1961 under President Kennedy, finishing in July 1963, more than two years later. As an agreement drew near, Kennedy urged his fellow citizens not to 'see only a distorted and desperate view of the other side, not to see conflict as inevitable, accommodation as impossible, and communication as nothing more than an exchange of threats'.²⁰³ However, to convince the Senate to ratify the test ban treaty, Kennedy administration officials found themselves making policy assurances — 'safeguards' — originally proposed by the Joint Chiefs of Staff, thus affirming and extending the hostile view of the Soviet Union supposedly rejected by the treaty. The safeguards were: 'comprehensive, aggressive and continuing underground nuclear test programmes'; 'the maintenance of modern nuclear laboratory facilities manned by top-flight scientific personnel'; maintaining the facilities and resources necessary for 'readiness-to-test programme', which would permit the immediate resumption of atmospheric testing if national security warranted it; and the improvement of monitoring systems to detect any

²⁰¹ Greene (2007), p. 204; Herken (2000), p. 121.

²⁰² Greene (2007), p. 215.

²⁰³ Kennedy, 'Commencement Address at American University in Washington', 10 June 1963. TAPP. This is widely regarded as one of Kennedy's most important speeches.

violations of the treaty.²⁰⁴ They committed the US to expanding its nuclear weapons development programme, just as it signed the inaugural arms control agreement of the nuclear age.

Making sense of this paradoxical outcome requires a closer look at the role of scientists in the domestic politics of negotiating and ratifying the PTBT. I consider performances of expertise by Edward Teller, the scientist most vocally opposed to a test ban, at the congressional hearings, which were a key stage in the treaty ratification process. These hearings were organised by the Senate Foreign Relations Committee, as well as the Preparedness Investigating Subcommittee of the Senate Committee on Armed Services (PIS). I focus on the SFRC hearings because they were the primary site of confrontation between proponents and opponents of the test ban treaty. I analyse how Teller's efforts to sabotage the PTBT were counteracted by the Kennedy administration, which used performances of expertise by its own scientists to dismantle Teller's arguments and attack his reputation. Teller arguably did greater damage in the lead-up to ratification through his private audiences with the Joint Chiefs and influential senators. Partly to counter his influence, the Kennedy administration committed to an expanded programme of nuclear weapons development.

The scientific narrative of fallout featured prominently in the public justifications given by Kennedy administration for the treaty, but less so in the debates between pro- and anti-test ban scientists during the SFRC hearings. The main reason for this had to do with the audience. Senators — the key gatekeepers in the ratification process — were more concerned than the general public that restricting testing would compromise America's nuclear defence capabilities. Anti-test ban scientists also stressed that the national security threat posed by the

²⁰⁴ Joint Chiefs of Staff, 'Statement of Position of the Joint Chiefs of Staff on the Three-Environment Nuclear Test Ban Treaty', 14 August 1963. Kennedy Presidential Library.

Soviet Union vastly exceeded the national security risks of fallout from testing. To defeat these arguments, and allay legislators' concerns, Kennedy and his SFRC collaborators ensured that 'their' nuclear scientists spoke foremost as defence experts.

Historical background

Although the Paris disarmament summit collapsed after the U-2 incident, an informal moratorium on nuclear testing persisted until after Kennedy's election victory in November 1960. As a member of the SFRC, Kennedy was familiar with the issues surrounding nuclear testing, and restricting it became a major theme of his presidential campaign. He had several reasons for wanting to continue with the moratorium and negotiate a test ban agreement: a concern with radioactive fallout, a fear of losing the propaganda war against the Soviet Union, and a desire to prevent the proliferation of nuclear weapons to other countries, especially China.²⁰⁵

The president spent 'hundreds and hundreds of hours' studying the complex issues relating to nuclear testing.²⁰⁶ Unlike Eisenhower, a test ban was supported by key figures in Kennedy's administration, including Jerome Weisner, the Special Assistant for Science and Technology; the new AEC Chairman Glenn Seaborg; Secretary of Defense Robert McNamara; Secretary of State Dean Rusk; and the Special Assistant for Disarmament, John McCloy.²⁰⁷ The appointment of General Maxwell Taylor as the Chairman of the Joint Chiefs of Staff also proved crucial. Although he initially expressed serious reservations about a test ban, he played a vital role in getting the other Service Chiefs to endorse the PTBT.²⁰⁸

²⁰⁵ Loeb (1991), pp. 169-171.

²⁰⁶ Jerome Weisner quoted in Loeb (1991), p. 192.

²⁰⁷ Ibid. p. 235.

²⁰⁸ Poole (2011), p. ix.

Upon taking office, Kennedy requested a delay in the resumption of test ban talks in Geneva in order to devise a negotiating position.²⁰⁹ A panel led by PSAC member James Fisk verified the accuracy of the Bethe Panel's conclusions. Another panel, chaired by Wolfgang Panofsky, determined that Soviets were unlikely to be cheating the test moratorium.²¹⁰ These findings empowered Kennedy to resume negotiations, but he soon realised that there were serious obstacles in the way of an agreement. Many of these arose from the design of the inspection system: for example, the number of on-site inspections, who would operate the control stations, who would sit on the control commission, and which 'unidentified seismic events' were subject to on-site inspection.²¹¹

In April 1961, Kennedy proposed a draft treaty, which was rejected by the Soviets. The Soviets then resumed testing in September 1961, while the US started underground tests soon after, then resumed atmospheric testing towards the end of 1961. Despite this setback, the administration retained an interest in a test ban, as there was greater international pressure to conclude a test ban, detection capability technology continued to advance, and there were concerns that nuclear weapons technology would proliferate to other states, especially in the developing world.²¹²

In August 1962, the US and the UK jointly proposed two new treaties: one that outlawed testing in all environments, and one that restricted testing underground. The Soviets rejected both, and negotiations once again stalled.²¹³ Then, in October 1962, the Cuban Missile Crisis brought the superpowers to the brink of nuclear war. Unlike earlier periods of heightened

²⁰⁹ The official title of these talks was The Geneva Conference on the Discontinuance of Nuclear Weapon Tests.

²¹⁰ Herken (2000), pp. 132-133.

²¹¹ Greene (2007), pp. 234-235.

²¹² Jacobsen and Stein (1966), pp. 343-349; Greene (2007), p. 234.

²¹³ Greene (2007), p. 238.

tension, such as the Korean War, both sides now possessed second-strike capabilities in the form of intercontinental and submarine-launched ballistic missiles. The spectre of mutually assured destruction spurred Khrushchev and Kennedy to restart the test ban negotiations. By early July 1963, it was clear that both the US and the USSR were willing to negotiate a test ban limited to the atmosphere, outer space, and underwater without any additional provisions, such as a moratorium on underground testing.²¹⁴ This allowed the contentious issue of on-site inspections on Soviet soil, which had hamstrung negotiations since 1958, to be put aside.²¹⁵ On 11 July, a small Western delegation led by Averell Harriman arrived in Moscow to negotiate with Soviet leadership, and the PTBT was initialled two weeks later, on 25 July.²¹⁶ Addressing the nation the next day, Kennedy called the treaty ‘a step towards reduced world tension’, as well as ‘a step towards freeing the world from the fears and dangers of radioactive fallout’:

[O]ver the years the number and the yield of weapons tested have rapidly increased and so have the radioactive hazards from such testing. Continued unrestricted testing by the nuclear powers...will increasingly contaminate the air that all of us must breathe. The loss of even one human life, or the malformation of even one baby—who may be born long after we are gone—should be of concern to us all.²¹⁷

Performance: backstage

Treaty ratification is a central avenue through which the legislative branch can influence foreign policy. For the US to ratify an international treaty, the Senate must give its ‘advice and consent’ by a two-thirds majority. The process of seeking the Senate’s approval formally begins when the president sends the signed treaty to the SFRC for review. If a majority of the

²¹⁴ Wenger and Geber (1999), pp. 472-473.

²¹⁵ Greene (2007), p. 240.

²¹⁶ The final agreement was signed on 5 August 1963.

²¹⁷ Kennedy, ‘Radio and Television Address to the American People on the Nuclear Test Ban Treaty’, 26 July 1963. TAPP.

Committee assents, they draft a treaty ratification document and dispatch it to the Senate. Here, it is debated, possibly amended, and voted on. Once passed, it is returned to the president as an instrument of ratification, for him to deposit with the relevant international body. The treaty then takes effect.²¹⁸ The SFRC is therefore the crucial gatekeeper in the ratification process: without its endorsement, treaties do not make it onto the Senate floor.

The ratification of the PTBT was complicated by the fact that another congressional committee decided to hold hearings on the test ban at the same time. The PIS was chaired by John Stennis, a forceful opponent of the test ban. Stacked with ‘hawks’ such as Scoop Jackson, Barry Goldwater, and Strom Thurmond, it was a more hostile arena for the PTBT than the Senate Foreign Relations Committee.²¹⁹ Its hearings took place in late May 1963, before the final negotiations took place in Moscow, and overlapped with the SFRC hearings in August. The following two subsections describe the backstage machinations of Edward Teller and the Kennedy administration respectively.

Edward Teller

By late 1962, scientific opinion had shifted decisively in favour of a test ban agreement with the Soviet Union. Teller’s views were now firmly in the minority, although he had a few allies, such as Lewis Strauss and John Foster, who succeeded Teller as director of the Livermore laboratory.²²⁰ Teller was excluded from Kennedy’s inner circle, and knew that the president

²¹⁸ Auerswald and Maltzman (2003).

²¹⁹ Loeb (1991), p. 184.

²²⁰ Teller became director after Ernest Lawrence died in 1958. In 1960, he became a professor of physics-at-large at the University of California. Hoover Institution Archives (1998).

did not like him or share his views on nuclear testing.²²¹ He therefore focused his efforts on influencing Congress, the Joint Chiefs of Staff, and the general public.

Teller invested in his relationships with powerful senators who were likely to oppose a test ban, and exploited those connections in the lead-up to the ratification hearings.²²² He was in regular correspondence with the Democratic Senator for Missouri, Stuart Symington since 1956.²²³ Symington frequently solicited Teller's opinion on media and academic reports on fallout and other testing issues.²²⁴ For instance, Teller wrote to him in late 1962 highlighting the problems with detecting tests underground below a certain threshold.²²⁵ Symington introduced him to John Stennis, and Teller offered to 'make the required statements on the need for further nuclear testing' before Stennis's Preparedness Subcommittee, and recommended a number of scientists and ex-AEC employees who could testify in favour of continued testing.²²⁶ He was also a confidant of Scoop Jackson, a member of the Joint Committee on Atomic Energy, who also sat on the SFRC.²²⁷ In March 1963, the JCAE held hearings designed to cast doubt on the monitoring system proposed by the Kennedy administration.²²⁸ As the SFRC ratification hearings concluded in late August, Teller

²²¹ Goodchild (2004), pp. 301-303.

²²² Robinson (2016), pp. 108-109.

²²³ Teller, 'Letter to Stuart Symington', 13 December 1956. Hoover Institution Archives (Paul Robinson copy).

²²⁴ See, for example, Teller, 'Letter to Stuart Symington', 27 September 1961; Symington, 'Letter to Dr. Edward Teller', 3 May 1963. Both in The State Historical Society of Missouri.

²²⁵ Teller, 'Letter to Stuart Symington', 11 September 1962. Hoover Institution Archives (Paul Robinson copy).

²²⁶ Teller, 'Letter to Stuart Symington', 8 August 1962; Teller, 'Letter to John Stennis', 8 August 1962. Both in Hoover Institution Archives (Paul Robinson copy).

²²⁷ An indication of the respect Jackson accorded Teller is that he asked Teller to recommend future members to serve on PSAC. Teller, 'Letter to Henry Jackson', 8 August 1962. Hoover Institution Archives (Paul Robinson copy).

²²⁸ The full title of these hearings was 'Developments in Technical Capabilities for Detecting and Identifying Nuclear Weapons Tests'.

provided him with a detailed analysis of the four safeguards demanded by the Joint Chiefs and suggested that they did not go far enough in mitigating US vulnerability.²²⁹

Teller also worked hard to convince the Joint Chiefs of Staff that a test ban treaty was not in the United States' best interests. Along with John Foster and Norris Bradbury, he often briefed them privately in the Pentagon.²³⁰ He also contributed to the Twining Committee's report to General Curtis LeMay, Chief of Staff for the Airforce. This argued that the US no longer led the Soviets in nuclear weapons technology, and that 'maintaining strong weapon laboratories and test readiness' would not reduce 'the risks of surprise abrogation [of a test ban treaty] to an acceptable level'.²³¹ Teller's influence over the Joint Chiefs especially vexed top officials in the Kennedy administration, as the Chiefs' endorsement of a treaty was seen as crucial to securing ratification. It is likely that Teller was a major factor behind the eleventh-hour protests against the treaty that they raised in mid-June 1963. At a meeting of the Committee of Principals — the interdepartmental coordinating body for disarmament negotiations, including the test ban — General Taylor stated that the draft treaty allowed Soviets to make 'important gains through clandestine testing', and that 'the AEC lab directors had made statements concerning the technical facts which made it impossible for the Chiefs to take opposing views since they relied heavily on the lab directors'.²³² Secretary Rusk responded by saying that 'he didn't think Teller was talking as a technical man when he talked about the test ban'.²³³

²²⁹ Teller, 'Letter to Henry Jackson', 29 August 1963. Hoover Institution Archives (Paul Robinson copy).

²³⁰ Uyehara (1966), p. 146.

²³¹ Twining Committee, 'Report to the Chief of Staff of the U.S. Airforce: Military Implications of U.S. and Soviet Nuclear Testing', 4 March 1963. Kennedy Presidential Library.

²³² 'Meeting of the Committee of Principals', 14 June 1963. Kennedy Presidential Library. The Twining Committee report was also discussed in this meeting.

²³³ Ibid.

The Kennedy administration

Kennedy sought an overwhelming majority in favour of treaty ratification in the Senate, and nuclear scientists played a critical role in his multi-pronged strategy for achieving this.²³⁴ He and his closest advisors ‘treated the Senate with elaborate consideration’, and maintained backchannel lines of communication with individual senators.²³⁵ He personally assured Senate Majority Leader Mike Mansfield and Minority Leader Everett Dirksen that nuclear weapons development and underground testing would be ‘vigorous and diligently carried forward’; that the US would ‘maintain a posture of readiness to resume testing’ should the Soviets flout the test ban, and that the PTBT ‘in no way’ limited the Commander-in-Chief’s authority to use nuclear weapons to defend the United States.²³⁶ He emphasised how the PTBT would leave America’s national security apparatus intact.

Recognising that Teller was one of the most effective and vociferous opponents of a test ban, Kennedy and his officials plotted to undermine him.²³⁷ The president blocked Teller’s performance of expertise in opposition to a test ban before the Southern Governor’s Conference in Arkansas, protesting it would be a ‘one-sided presentation’.²³⁸ The NSC discussed how to counteract the ‘prominence of Dr. Teller’ by publicising the views of scientists who supported the treaty.²³⁹ At Seaborg’s suggestion, Isidor Rabi assembled 34

²³⁴ The president was significantly less optimistic than others in his administration about the likelihood of gaining a majority. See Loeb (1991), p. 176; Seaborg (1981), p. 265.

²³⁵ Loeb (1991), p. 196.

²³⁶ Kennedy, ‘Letter to Senator Mansfield and Senator Dirksen’, 10 September 1963. Kennedy Presidential Library.

²³⁷ As Senator Fulbright noted in a telephone conversation with Kennedy: ‘The only thing Teller had over the others is he is such an actor...he’s John L. Lewis and Billy Sunday all wrapped in one’. ‘Telephone Recordings: Dictation Belt 26C.1. Nuclear Test Ban Treaty Hearings’, 23 August 1963. Kennedy Presidential Library.

²³⁸ Goodchild (2004), p. 303.

²³⁹ Smith, ‘Summary Record of NSC Standing Group Meeting No. 11’, 30 July 1963. *FRUS*.

Nobel laureates to sign a declaration supporting the treaty.²⁴⁰ In an unorthodox move, PSAC publicly endorsed the PTBT in a statement designed to counter ‘the technical-military issues raised by Dr. Edward Teller’.²⁴¹ MacGeorge Bundy sent the statement to Senator Humphrey, suggesting that it be used in the Senate floor debate ‘as additional evidence that Dr. Teller is not speaking for the scientific community but rather against the position taken by the overwhelming majority of informed scientists’.²⁴² These attacks continued while the hearings were in process. For example, Hans Bethe challenged Teller’s authority to speak on anti-ballistic missile systems, noting in an open letter to Senator Fulbright that ‘[h]e is not an expert on this subject’.²⁴³

Senior administration officials and Jerome Wiesner corralled an impressive array of nuclear scientists into appearing before the SFRC.²⁴⁴ They selected individuals who could undermine Teller’s testimony with compelling counter-performances of expertise. This included Seaborg, a chemist; Harold Brown, the Department of Defence’s Director of Defense, Research and Engineering; Herbert York, ex-director of the Livermore laboratory and a PSAC member under Eisenhower; Norris Bradbury, director of the Los Alamos laboratory; and George Kistiakowsky, James Killian’s successor as Special Assistant for Science and Technology under Eisenhower. The administration’s allies in the SFRC, Chairman Fulbright

²⁴⁰ Ibid; Rabi, ‘Letter to J.W. Fulbright’, 14 August 1963. *Nuclear Test Ban Treaty: Hearings before the Committee on Foreign Relations, United States Senate, 88th Congress, 1st Session* (hereafter *Nuclear Test Ban Treaty Hearings*), p. 247.

²⁴¹ Bundy, ‘Letter to Hubert H. Humphrey’, 10 September 1963. Kennedy Presidential Library. The Friday before Teller’s SFRC testimony on 20 August, PSAC met to ‘prepare their estimate of the validity of the opposition arguments for the President’. Doty, ‘Letter to George B. Kistiakowsky’, 9 August 1963. Harvard University Archives.

²⁴² Ibid.

²⁴³ Bethe, ‘Letter to J. William Fulbright’, 27 August 1963. *Nuclear Test Ban Treaty Hearings*, pp. 1007-1008.

²⁴⁴ See, for example, Wiesner, ‘Letter to McGeorge Bundy’, 21 August 1963. Kennedy Presidential Library. In this letter, Wiesner suggests a number of scientists, including Herbert York and Wolfgang Panofsky, who could serve as ‘possible expert witnesses on the AICBM problem’.

and Senator Hubert Humphrey, ‘were at pains to lead succeeding scientific witnesses through the points raised by Teller, with a view to refuting them one by one’.²⁴⁵ Other figures in the administration, like McGeorge Bundy, also closely monitored Teller’s performance before the Preparedness Subcommittee so as to explicitly refute his points in the SFRC hearings.²⁴⁶

Finally, Kennedy felt that the treaty’s prospects would be helped ‘if there was visible evidence of the support of businessmen, scientists and educators, and, in particular, the conservative elements among them’.²⁴⁷ He did not want the test ban to appear as ‘solely a liberal cause’.²⁴⁸ He encouraged the formation of a Citizens Committee for a Nuclear Test Ban Treaty, a civil society group headed by former UN Representative James Wadsworth. The Committee prepared a statement signed by sixty-two scientists, plus a covering letter by James Killian and George Kistiakowsky, and sent one to each Senator just before the final vote.²⁴⁹

Performance: front stage

Teller testified relatively early on in the SFRC hearings: after Dean Rusk, Robert McNamara, and the Joint Chiefs had defended the treaty, but before most of the scientists who disagreed with his views appeared.²⁵⁰ This was likely a tactical move by Chairman Fulbright, who exercised directive dominance over the proceedings as a whole, to deprive Teller of the

²⁴⁵ Seaborg (1981), p. 272.

²⁴⁶ For example, in a packet of questions and answers for MacGeorge Bundy before his SFRC appearance, a whole section was devoted to Teller and Strauss’s arguments. ‘New Questions and Answers on Test Ban Treaty’, 27 August 1963. Kennedy Presidential Library.

²⁴⁷ Wadsworth, ‘Letter to Dr. James R. Killian’, 9 August 1963. MIT Institute Archives.

²⁴⁸ Norman Cousins quoted in Seaborg (1981), p. 265.

²⁴⁹ Wadsworth, ‘Telegram to Dr. James R. Killian’, 9 September 1963. MIT Institute Archives. For the responses of these senators, see the contents of ‘Citizens Committee’, Box 30, James Killian Papers, MIT Institute Archives.

²⁵⁰ Dean Rusk testified on 12 August; Robert McNamara on 13 August; Maxwell Taylor and Glenn Seaborg on 14 August; Edward Teller on 20 August; Harold Brown and Norris Bradbury on 21 August; Herbert York on 26 August, and George Kistiakowsky on 27 August.

opportunity to address their criticisms. Below, I first address Teller's arguments against a test ban, and illustrate how these were neutralised by his opponents. I then examine how Fulbright and Humphrey managed their interactions with the scientists who dominated the drama of the hearings to undermine Teller's performances of defence and scientific expertise by attacking his credibility.

Dismantling Teller's arguments against a test ban

In their performances of expertise, the four scientists allied with the administration — Kistiakowsky, Bradbury, York, and Brown — as well as AEC Chairman Seaborg, made sure to address in detail each of Teller's main arguments against a test ban. Teller spoke primarily as a defence expert: his overarching position was that the PTBT hindered America's ability to develop and maintain an effective deterrent against the Soviet threat, and was therefore 'not a step toward peace but rather a step away from safety, possibly a step toward war'.²⁵¹ Teller drew a positive association between increased nuclear capabilities and national security, whereas the other scientists did not.

Teller argued that the PTBT prevented the US from developing an anti-ballistic missile (ABM) system while the Soviet Union had acquired the knowledge to do so during their 1961 test series.²⁵² The others retorted that there was no evidence to suggest the Soviets were ahead in this regard, and, in any case, further atmospheric tests would not yield useful information.²⁵³ Underground tests could advance ABM warhead development.²⁵⁴ Moreover,

²⁵¹ 'Statement of Edward Teller', 20 August 1963. *Nuclear Test Ban Treaty Hearings* (hereafter *NTBTH*), p. 418.

²⁵² *Ibid.* p. 423.

²⁵³ 'Statement of George B. Kistiakowsky', 27 August 1963. *NTBTH*, p. 854.

²⁵⁴ 'Statement of Harold E. Brown', 21 August 1963. *NTBTH*, p. 530.

the obstacles to an effective ABM system chiefly lay in ‘the areas of detection, identification and interception and not in nuclear weapons technology’.²⁵⁵

Teller also asserted that the Soviets were ahead in nuclear weapons development, and the PTBT would prevent the US from catching up. When Fulbright put this statement to York, he categorically rejected it: ‘I believe that the Russians are not ahead of us in knowledge [about nuclear weapons]. In fact, quite the other way round’.²⁵⁶ Seaborg and the others all echoed this.²⁵⁷ They also disputed a related claim of Teller’s — that an atmospheric test ban would prevent the US from developing high-yield nuclear weapons — on the grounds that such weapons were generally not useful. In addition, nuclear weapons could be improved via techniques ‘in areas largely unaffected by the test ban treaty’.²⁵⁸

A major theme of Teller’s testimony was that the Soviets were fundamentally untrustworthy, exploiting any opportunity to engage in clandestine testing. This theme was reinforced in the testimonies of Lewis Strauss and John Foster. Scientists who supported the treaty found ways of responding to this claim while avoiding the issue of Soviet trustworthiness, thus remaining within the boundary of their role as defence experts. Brown observed that, in order to escape detection, the Soviets would be restricted to very low yield tests which would not permit ‘any substantial military gain relative to the United States’. The only use of clandestine atmospheric tests was to acquire information about weapons’ effects, but the ‘elaborate preparation and equipment’ involved made them ‘highly subject to detection by conventional intelligence’.²⁵⁹ Ultimately, it was Kistiakowsky who provided the most compelling

²⁵⁵ ‘Statement of Herbert York’, 26 August 1963. *NTBTH*, p. 769.

²⁵⁶ *Ibid.* p. 765.

²⁵⁷ Seaborg, Brown, and Kistiakowsky’s comments can be found in *NTBTH*, p. 266, 541, and 859 respectively.

²⁵⁸ ‘Statement of Harold E. Brown’, 21 August 1963. *NTBTH*, p. 760.

²⁵⁹ ‘Statement of Harold E. Brown’, 21 August 1963. *NTBTH*, p. 541.

counterargument: Soviet trustworthiness was irrelevant, as the US had an independent system of monitoring compliance with a test ban. If the US discovered that the Soviets were engaging in clandestine testing, it would be free to abrogate the treaty without incurring a penalty.²⁶⁰

The scientific narrative of fallout was highlighted in Rusk and McNamara's justifications for the treaty. As Rusk put it, 'The treaty will reduce the radioactive pollution of the planet...We have a high obligation to safeguard life and health and the genetic integrity of the human race'.²⁶¹ Accordingly, Teller devoted a portion of his testimony to de-risking fallout. 'The test ban and the fallout', he claimed, 'are linked only by propaganda':

Contamination in the atmosphere [from testing] produces similar biological effects as a number of natural processes such as cosmic rays, radioactivity in the soil, radioactive potassium in the blood...there are essentially no differences. The radioactivity in the atmosphere amounts in its worst biological effects over great numbers of people to 10 percent of the natural background.²⁶²

While he did not deny that radioactivity posed biospheric risks, he argued that fallout from testing did not, and would never, elevate that risk to an extent that justified a test ban. Senator Humphrey interjected to highlight an inconsistency in Teller's testimony, pointing out that the only restriction on nuclear testing he endorsed was one in which the nuclear powers agreed to limit fission products to one megaton per year (i.e., a threshold ban). Teller explained that this was purely to appease world opinion: 'while fallout is no real problem from the point of view of health, it certainly is a great problem in connection with psychology and politics'.²⁶³ The other scientists did not respond to this by dramatising the present dangers of fallout. In fact, Seaborg and Kistiakowsky each made sure to state that fallout from testing to

²⁶⁰ 'Statement of George B. Kistiakowsky', 27 August 1963. *NTBTH*, p. 854.

²⁶¹ 'Statement of Dean Rusk', 12 August 1963. *NTBTH*, p. 19.

²⁶² 'Statement of Edward Teller', 20 August 1963. *NTBTH*, p. 455.

²⁶³ *Ibid.* p. 500.

date was unlikely to pose hazards. Instead, they said that *continued* testing would almost certainly damage the biosphere, and was therefore a national security risk.²⁶⁴

Attacking Teller's credibility

Senators Fulbright and Humphrey used their exchanges with Teller and other scientists to attack Teller's credibility as a defence expert. They did so in three ways. The first was to establish for the audience that he was not privy to the same intelligence as the government scientists. Therefore, his claims that the Soviets were ahead in developing an ABM system, as well as nuclear weapons development in general, were purely speculative. Humphrey utilised this strategy in an intercourse with Brown, who worked for the Department of Defence:

Senator Humphrey: [M]any men are making what are, I believe, statements which are not scientific facts. They have to deduct from certain facts that they have, and they have to presume and assume and say...that [a test ban] will accelerate the arms race...Did Dr. Teller have access to information that is not available to you?

Dr. Brown: No, I do not believe so.

Senator Humphrey: Does he have access to all the information that is available to you, intelligence information as well?

Dr. Brown: I believe not. In fact, I know not.²⁶⁵

The second was to create the impression that Teller's position on a test ban was informed by his political biases rather than his knowledge of nuclear weapons. Fulbright challenged him: 'You would think it proper that while we gave great credence to your scientific knowledge, we might question your political experience, don't you?'²⁶⁶ Later, during Herbert York's testimony, Fulbright referred to a national television show that Teller had appeared on the

²⁶⁴ 'Statement of Glenn Seaborg', 14 August 1963; 'Statement of George B. Kistiakowsky', 27 August 1963. Both in *NTBTH*, p. 219, 862.

²⁶⁵ 'Statement of Harold E. Brown', 21 August 1963. *NTBTH*, p. 578. In his testimony, Kistiakowsky asked the committee to give special weight to the testimony of Harold Brown. 'Statement of George B. Kistiakowsky', 27 August 1963. *NTBTH*, p. 877.

²⁶⁶ 'Statement of Edward Teller', 20 August 1963. *NTBTH*, p. 473.

previous evening, describing him as ‘emotional’ and calling the show ‘a gross distortion of these hearings’.²⁶⁷ He asked York to discuss Teller’s reputation, noting that as York ‘was not politically interested in this matter [and] not interested in this administration’, it was ‘entirely proper’ that he ‘assist this committee and the country in evaluating Dr. Teller’s testimony’.²⁶⁸ York, an ex-colleague of Teller’s at Livermore, avoided casting aspersions on him, but remarked several times that Teller’s professional standing largely derived from his contributions to nuclear weapons development in the early 1950s. This implied that Teller’s defence expertise was outdated.²⁶⁹ Kistiakowsky, on the other hand, had no qualms about pinpointing the reason for Teller’s campaign against a test ban:

Dr. Teller has been extraordinarily single-minded in his devotion to one project: namely, bigger and better nuclear weapons...I have run into many cases where a man who has devoted...his whole life perhaps to a given line of work, reaches a point where is convinced that this kind of project...is a matter of life and death to the country.²⁷⁰

Finally, Fulbright asked both Bradbury and York whether they thought Teller’s opinions on the treaty were representative of the scientific community. Both said no: ‘If you talk about nuclear scientists in general’, said York, ‘I am sure that they are primarily...in favour of proceeding with the test ban’.²⁷¹ This established for the audience that Teller’s views were in the minority.

²⁶⁷ ‘Statement of Herbert York’, 26 August 1963. *NTBTH*, p. 772.

²⁶⁸ *Ibid.* p. 771.

²⁶⁹ *Ibid.* p. 764.

²⁷⁰ ‘Statement of George B. Kistiakowsky’, 27 August 1963. *NTBTH*, p. 861.

²⁷¹ ‘Statement of Norris E. Bradbury’, 21 August 1963; ‘Statement of Herbert York’, 26 August 1963. Both in *NTBTH*, p. 591, 767.

Political effects

To understand the political effects of the performances of expertise staged during the PTBT ratification process, it is helpful to draw on Robert Putnam's theory of international agreements as a two-level game. This consists of bargaining between state negotiators, leading to a tentative agreement (Level I), and discussions among the domestic constituents of each state over whether to ratify the agreement (Level II). Treaties are the product of simultaneous games at the international and domestic levels: state leaders must 'play' both.²⁷²

Teller's efforts to undermine a comprehensive test ban in the first half of 1963 included performances of expertise before the Preparedness Investigating Subcommittee and the Joint Committee on Atomic Energy.²⁷³ These appearances contributed to restricting the Kennedy administration's *win-set*: the set of possible test limitation agreements with the Soviets that would also be ratified by the Senate.²⁷⁴ In May 1963, Senator William Proxmire informed the president that a comprehensive test ban treaty was unlikely to receive the two-thirds majority needed for ratification.²⁷⁵ The next month, Rusk and McNamara warned Kennedy that there was 'little chance of winning the necessary support for a [comprehensive] ban from the Joint Chiefs and other groups while Teller and Foster continued to provide private briefings on the essential importance of testing for diagnosing and correcting deficits in the US arsenal'.²⁷⁶

²⁷² Putnam (1988).

²⁷³ Goodchild (2004), p. 304.

²⁷⁴ See *ibid.* p. 437.

²⁷⁵ Proxmire, 'What's right about a nuclear test ban?', 17 May 1963. *Congressional Record (Senate Proceedings), Volume 109, Part 7*, pp. 8893-8905.

²⁷⁶ Goodchild (2004), p. 304.

Kennedy could have reacted by downgrading his ambitions for a total test ban to a partial one ahead of negotiations in Moscow, but did not: Ambassador Harriman was instructed to aim for the most comprehensive treaty possible.²⁷⁷ However, Kennedy's perception of a narrowed win-set likely prompted him to settle quickly for a partial test ban once it became clear that Khrushchev was sincerely committed to some form of test limitation agreement, but would not accept the on-site inspections needed to monitor a comprehensive ban.²⁷⁸

To win the domestic 'game', Kennedy also accepted the four safeguards proposed by the Joint Chiefs of Staff, and made them an important part of selling the PTBT to the Senate.²⁷⁹ The JCS were highly sceptical of the treaty: as many senators looked to the JCS to guide their decision-making, Kennedy saw their endorsement as crucial to securing ratification.²⁸⁰ He met with the Joint Chiefs individually to garner their support for the treaty, then collectively two days before the treaty was signed. It was during the latter occasion that Kennedy probably agreed to their four proposed safeguards.²⁸¹ This included 'comprehensive, aggressive and continuing underground nuclear test programmes', which the president felt was unnecessary.²⁸² In exchange, the JCS unanimously supported the treaty in public, arguing before the Senate that its political advantages outweighed its military drawbacks.²⁸³ Worried

²⁷⁷ Seaborg (1981), pp. 228.

²⁷⁸ Ibid. pp. 238-243.

²⁷⁹ The Chiefs had first mentioned these safeguards, albeit in somewhat different form, when testifying before the Preparedness Investigating Subcommittee in June 1963. Terchek (1970), p. 45.

²⁸⁰ This reliance was evident during the ratification hearings, where both the SFRC and the Preparedness Investigating Subcommittee gave the Chiefs significant airtime. Furthermore, several senators 'sought assurance that the Joint Chiefs had been given full opportunity to comment on the treaty in its formative stages...and that no pressure had been brought on them at any time to reach a favourable conclusion'. Seaborg (1981), p. 270.

²⁸¹ Ibid. p. 188.

²⁸² Joint Chiefs of Staff, 'Statement of Position of the Joint Chiefs of Staff on the Three-Environment Nuclear Test Ban Treaty', 14 August 1963. Kennedy Presidential Library.

²⁸³ Kaplan et al. (2006), p. 352.

that the JCS would be manipulated by members of the Preparedness Investigating Subcommittee into denouncing the treaty, Kennedy ensured that they appeared before the SFRC first, thereby going on the public record with their support.²⁸⁴

The safeguards committed the government to an accelerated testing programme, greater investment in its nuclear weapons laboratories, and the maintenance of a permanent state of readiness to resume atmospheric testing. They were effectively a *side payment* to senators who were concerned that the PTBT would leave America in a position of greater vulnerability vis-à-vis the Soviet Union.²⁸⁵ Teller did not view the safeguards as a personal triumph. However, without his relentless campaigning against the treaty to highlight its military disadvantages before legislators and the JCS, it is unlikely that the JCS would have insisted on these safeguards, or that Kennedy would have acquiesced to them in order to incentivise senators to ratify the treaty.

By comparison, Teller's performances of expertise before the SFRC had minimal effect on ratification itself. Teller and other test ban opponents either had to convince over one third of senators to vote against the treaty, or secure the passage of crippling reservations that would force both sides back to the negotiating table.²⁸⁶ Teller had a receptive audience in the Preparedness Investigating Subcommittee, which concluded that the treaty would 'result in serious, and perhaps formidable, military and technical disadvantages'.²⁸⁷ The stage the

²⁸⁴ 'Telephone Recordings: Dictation Belt 25B.2. Nuclear Test Ban Treaty', 12 August 1963. Kennedy Presidential Library. The Preparedness Investigating Subcommittee's hearings were conducted in private, with only daily summaries made available to legislators, although Kennedy expected the subcommittee members to leak information to the press.

²⁸⁵ See Putnam (1988), pp. 450-451.

²⁸⁶ Putnam correctly observes that, 'since [an] identical agreement must be ratified by both sides, a preliminary Level I agreement cannot be amended at Level II without re-opening the Level I negotiations...the final ratification must be simply "voted" up or down'. Putnam (1988), p. 437.

²⁸⁷ Preparedness Investigating Subcommittee (1963), p. 11.

Subcommittee offered, however, was overshadowed by the SFRC, especially since Fulbright arranged for the PIS and JCAE members to participate in the SFRC hearings. This signalled that ‘all important military or technical issues could be fully dealt with at the SFRC hearings, and that there was no need for other committees to get involved’.²⁸⁸

Teller’s performance during the SFRC hearings was neutralised by the scientists that the Kennedy administration and their congressional allies assembled to oppose him. He was not able to socially sustain the claim that his opposition to the treaty was grounded in objective technoscientific knowledge. Although Fulbright worried that Teller had ‘made an impression’ on some junior committee members, his performance of expertise ultimately failed to sway them: on 3 September, the SFRC voted in favour of Senate ratification by a margin of sixteen to one.²⁸⁹ The Senate then ratified the treaty by an overwhelming majority of eighty to nineteen. Dissenting legislators tabled three reservations to the treaty that would have required negotiations to reopen, but all were defeated by wide margins.²⁹⁰

8. Alternative explanations

Epistemic community theory and persuasion

In epistemic community theory, experts’ access to decision-makers is determined by their ‘professional training, prestige and reputation for expertise in an area highly valued by society’.²⁹¹ While not wrong per se, this concept of access is analytically thin. Many nuclear

²⁸⁸ Loeb (1991), p. 186.

²⁸⁹ ‘Telephone Recordings: Dictation Belt 26C.1. Nuclear Test Ban Treaty Hearings’, 23 August 1963. Kennedy Presidential Library.

²⁹⁰ The only reservation that was approved was one which required all future amendments to the treaty to be submitted to the Senate. Terchek (1970), pp. 177-178.

²⁹¹ Haas (1992), p. 38.

scientists were widely recognised for their competence, so this does not explain why scientists who objected to a test ban, like Ernest Lawrence and Edward Teller, initially had greater access to key decision-makers than their equally well-qualified colleagues. This was because of the crucial role Lewis Strauss played as their intermediary and collaborator. As Manhattan Project veterans and leading scientists at a national nuclear weapons laboratory, Lawrence and Teller had considerable cultural capital, but they lacked the close social ties to politicians that Strauss was able to establish as AEC Chairman and Eisenhower's Special Assistant for Atomic Energy. From 1954 to 1957, Eisenhower turned to Strauss whenever he wanted information and advice on nuclear testing; Strauss leveraged this to elevate the research of his favoured scientists and prevent contradictory advice from reaching the president.

As long as experts' 'recognised competence' does not change, epistemic community theory leads us to expect that their access to decision-makers is relatively constant over time. The reality is more complex, exemplified by the ascendance of PSAC relative to the Strauss-Teller-Lawrence group from 1958 onwards. Both teams of performers offered an assessment of whether a test ban treaty would be to the military advantage of the United States. The way in which they did so fundamentally shaped how their expertise was received. James Killian and Hans Bethe presented the findings of the Ad Hoc Nuclear Testing Capabilities Panel as purely technical commentary on whether a test ban agreement could be adequately monitored. Bethe created the impression of a broad consensus at this level, which Killian then used as a platform to expand the scope of PSAC's authority to include the issue of whether a test ban would be militarily advantageous. In contrast, Teller engaged in loud public protests against a test ban, not bothering to conceal the fact that his position stemmed from his fear and distrust of the Soviet Union. There is no evidence to suggest that Eisenhower ever doubted Teller's abilities as a nuclear scientist, but he failed sustain an impression of

objectivity — both as a scientific expert and as a defence expert — and this weakened Eisenhower's confidence in him.

With one notable exception, communicative action does not adequately capture how nuclear scientists and their collaborators interacted with various audiences. That exception is James Killian's revised support for a comprehensive test ban after Lloyd Berkner's Panel on Seismic Improvement found that the Geneva monitoring system would only be able to detect tests of twenty kilotons or more. In this instance, Killian showed that he was open to being persuaded by what he regarded as the superior argument against a comprehensive ban, and changed his advice to Eisenhower accordingly.²⁹²

Other events studied in this chapter reveal significant differences in experts' regional behaviour. The BEAR study was presented as an independent inquiry into the global risks of fallout, thus concealing the AEC's backstage influence over its proceedings. The genetics panel privately admitted that the 'permissible dose' they proposed was essentially an arbitrary figure, but nonetheless based their scientific narrative on it. Libby's performances of expertise to de-risk the scientific narrative of fallout relied on models of the atmospheric dispersion of radioactive particles that were disputed by his peers. He also suppressed data on fallout collected by Project Sunshine researchers that might cause public alarm. Strauss, Teller and Lawrence's performance of the 'clean' bomb narrative concealed from Eisenhower the substantial technological hurdles in developing weapons with reduced fallout. Finally, communicative action is precluded in situations 'where actors point to their rank or status'.²⁹³ During the treaty ratification hearings, performances of expertise by scientists allied with the

²⁹² As Thomas Risse puts it: 'Where argumentative rationality prevails...[actors] are prepared to change their views of their world or even their interests in light of the better argument'. Risse (2000), p. 7.

²⁹³ Ibid. p. 19.

Kennedy administration highlighted their status as government insiders, while portraying Teller as lacking the authority to comment on the military aspects of the treaty.

Securitisation theory and threatening

Bentley Allan proposes that experts ‘invoke uncertainty to raise awareness and mobilise action’.²⁹⁴ The BEAR study comes closest to his account of experts’ rhetoric. The summary report warned that fallout could have profoundly harmful effects on the biosphere. However, in all areas apart from genetics and pathology, it was uncertain as to what those effects could be. The genetics panel, meanwhile, merged uncertainty with certainty: although they could not know the exact genetic consequences of radiation exposure, there was no doubt that fallout would cause harmful mutations. The Eisenhower administration had commissioned the BEAR study to gain control over the fallout debate, but ended up ceding agenda-setting power to congressmen like Chet Holifield, scientists like Ralph Lapp, and presidential contender Adlai Stevenson. While invoking uncertainty in a performance of expertise can attract attention by terrifying an audience, alone it offers no clear path forward. This leaves room for others to capitalise on the attention and introduce their own narrative.

In the other performances of expertise examined above, nuclear scientists and their collaborators employed a wide range of rhetorical strategies. Libby’s performances of expertise aimed to minimise rather than highlight the risks of fallout to facilitate the government’s continued testing. Bethe’s Ad Hoc Panel on Nuclear Testing Requirements assured its audience that a monitoring system for a test ban agreement was feasible, while the Killian Report, which followed, assured decision-makers that a test ban would freeze America’s technical superiority in nuclear weapons development, conferring a short-term

²⁹⁴ Allan (2017a), p. 812.

military advantage. Strauss and Teller exaggerated the uncertainty around the performance of such a monitoring system. They also claimed that the Soviets, being inherently untrustworthy, would certainly violate a test ban agreement if given the opportunity.

Finally, characterising fallout as an ‘existential threat’ hinders rather than advances our understanding of the nuclear testing debates, because it conflates the danger posed by the Soviet Union with the danger posed by fallout. From each discourse of danger emerged a different representation of nuclear weapons and their development: a means of deterring a threatening actor, and a risk to the biosphere that would only become apparent over the long term. By analytically separating them, we can better understand how performers switched between or combined elements of each discourse in order to legitimise certain courses of action.

9. Conclusion

Between 1945 and 1963, the four nuclear powers — the US, the Soviet Union, the United Kingdom, and France — carried out 458 atmospheric tests. Their combined yield was estimated at 428 megatons, roughly equivalent to 29,000 Hiroshima-sized bombs.²⁹⁵ As a result, by the early sixties, ‘there was no place on Earth where the signature of atmospheric nuclear testing could not be found in soil, water and even polar ice’.²⁹⁶ In the decade following the PTBT’s implementation, the nuclear powers conducted 436 underground tests.²⁹⁷ Moving testing underground significantly reduced the hazards of radioactive fallout, but did not completely eliminate it: radioactive gas could escape through vents into the atmosphere,

²⁹⁵ Comprehensive Nuclear-Test-Ban Treaty Organisation (2012).

²⁹⁶ Simon et al. (2006), p. 48.

²⁹⁷ Arms Control Association (2020).

while radionuclides such as plutonium could leak into the ground.²⁹⁸ Even so, the PTBT was more successful as an agreement to manage the biosphere than it was as an arms control treaty. Nuclear testing was further restricted by the 1974 Threshold Ban Treaty, in which the US and USSR agreed to limit underground tests to 150 kilotons, although this was not ratified until 1990. A total ban on nuclear testing for any reason remains elusive: although the Comprehensive Nuclear Test Ban treaty was signed by 185 countries in 1996, it has been unenforceable because eight states, including the US, China, Iran, and North Korea, have failed to ratify it.

The US government's approach to the PTBT, the 'safeguards' that accompanied its domestic ratification, and the various positions on nuclear testing the government adopted over the preceding decade, are products of discourses of danger as risk and as threat. The representation of the Soviet Union as a national security threat narrowed the policy options available to manage the risk of fallout. Meanwhile, the depiction of fallout from testing as destructive to the biosphere complicated the understanding of nuclear weapons as instruments of defence, since it highlighted how their very development posed a national security risk requiring management.

David Rosenberg writes: 'Where Harry Truman viewed the atomic bomb as an instrument of terror and a weapon of last resort, Dwight Eisenhower viewed it as an integral part of American defence, and, in effect, a weapon of first resort'.²⁹⁹ The scientific narrative of fallout helped to dismantle Eisenhower's New Look policy and the doctrine of massive retaliation by calling into question whether nuclear bombs could be seen as 'just another weapon' in

²⁹⁸ See Office of Technology Assessment (1989).

²⁹⁹ Rosenberg (1983), p. 28.

America's military arsenal.³⁰⁰ Within the administration, the scientific narrative of fallout was rarely used to justify restrictions on testing. Eisenhower's determination to pursue a test ban treaty mainly flowed from his conviction that disarmament was the only way to avert a catastrophic nuclear war; only late in his presidency did he appear to accept the risks of fallout. Still, he ascribed the scientific narrative of fallout great importance. His public speeches and private discussions make it clear that he regarded that narrative as a principle reason for growing opposition to nuclear testing from the American public and America's allies. He tended to see that opposition as rooted in fear rather than reason, but nonetheless accepted it as a major constraint on the actions that his government could take regarding nuclear weapons. Once PSAC confirmed that a test ban could be adequately monitored and temporarily 'freeze' American military advantages, he and Dulles took the first significant steps to negotiate one independently of a broader disarmament agreement. This shows that a scientific narrative need not motivate individual decision-makers in order to shape political rationality.

By contrast, Kennedy entered office strongly convinced that fallout from testing risked national security. This, alongside his concerns about nuclear proliferation and a spiralling arms race, made concluding a comprehensive test ban a priority of his presidency. To achieve this, Kennedy had to secure the endorsement of the Joint Chiefs of Staff, as well as a two-thirds majority in the Senate. Hence, experts who were socially excluded from the president's inner circle, like Edward Teller, still had ample opportunity to shape his administration's actions. By mobilising opposition to a treaty, Teller's performances of expertise contributed to narrowing Kennedy's perceived win-set, increased his willingness to settle for a partial test

³⁰⁰ Lehman (2016).

ban, and compelled him to offer comprehensive ‘safeguards’ as a side-payment to legislators in exchange for ratifying the treaty.

This chapter showed how the boundaries of permissible action with respect to nuclear testing were drawn and redrawn by performances of both defence and scientific expertise. Nuclear scientists shifted between these two roles depending on what was politically expedient. Recognition as a scientific expert enabled some nuclear scientists, like Willard Libby, to legitimise continued testing by the Eisenhower administration by de-risking fallout. It also empowered Teller and Lawrence to re-direct the scientific narrative of fallout: further testing, they argued, was needed to develop a ‘clean’ bomb that would produce no fallout; restrictions on testing ruled out or significantly delayed this possibility. Recognition as defence experts, meanwhile, enabled nuclear scientists to participate in the discourse of danger as threat, but only to the extent of providing ‘technical’ insights, e.g. on the effectiveness of monitoring systems for deterring violations of a test ban, or the state of each superpower’s nuclear weapons arsenal. Some scientists who opposed a test ban, like Edward Teller, went beyond this and offered politically and emotionally charged analyses of Soviet intentions, but squandered their social and cultural capital in the process.

7. Conclusion

The title of this thesis, *Clearer Than Truth*, is taken from the memoirs of Dean Acheson, Secretary of State under President Truman. In it, he recounted selling the worldview expressed in NSC 68 to the American people:

The task of a public officer seeking to explain and gain support for a major policy is not that of the writer of a doctoral thesis. Qualification must give way to simplicity, nicety and nuance to bluntness, almost brutality in carrying home a point...If we made our points clearer than truth, we did not differ from most other educators and could hardly do otherwise.¹

This quote captures the essence of my theoretical argument. With the flair and skill of thespians, scientific experts tell stories about how power ought to be exercised. As they perform expertise, they claim authoritative knowledge about the future, couched in objective diction that their audiences recognise as ‘scientific’. I conceptualise these stories as scientific narratives, consisting of a number of acts: scaling a global governance object; depicting an undesirable future for that object, posing a risk (or risks) to national security; implicating an actor in intervening to manage that risk(s); and, sometimes, identifying an opportunistic enemy waiting to exploit an undesirable future. Particular scientific narratives are not best judged by whether or not they faithfully represent some objective reality, but by the extent to which they form a call to action that is clearer, and more compelling, than the truth.

Acheson’s quote also recalls a watershed moment in the historical period to which I applied my theory: the early Cold War. As I argued in the Introduction, ‘national security’ only became a rhetorical commonplace and a lodestar for decision-makers during World War II. NSC 68 was one of the first policy statements of the postwar era to elaborate on the meaning

¹ Acheson (1967), p. 375. NSC 68 itself was only declassified in February 1975.

of national security. It did so by distinguishing between two kinds of danger that America confronted: the threat posed by the Soviet Union and its satellite states, and the socioeconomic conditions precipitating a ‘general absence of order among nations’, which could place America at risk of harm even if no nation harboured any ill intent towards it.² Writing in 1950, the authors of NSC 68 were clear that a massive buildup of military capabilities was required to neutralise the Soviet threat, but were less certain about how to manage national security risks — or even what those risks were to begin with. By then, however, the institutional and social context which would generate answers to those questions had been established. This was the unprecedented enrolment of scientists in government service during wartime; the matrix of federal agencies, departments, and laboratories created to extract maximum value from their endeavours; and their eventual return to universities and institutes newly awash with state funding for ‘policy-relevant’ research.³

In this thesis, I showed how performances of expertise articulated or engaged with the national security risks arising from underdevelopment, overpopulation, and radioactive fallout, and suggested ways of managing them. Thus, like critical security studies (CSS) scholars, I studied danger as ‘an effect of interpretation’, and not as an objective condition.⁴ I agree with them that ‘risk’ is a useful ideal type for thinking about forms of insecurity that arise from configurations of undesirable conditions.⁵ But, by concentrating on the early Cold War period, I write against the tendency of the CSS literature to conflate the discovery of risk

² ‘NSC 68: United States Objectives and Programs for National Security’, 14 April 1950. Wilson Centre Digital Archive.

³ See Engerman (2010), pp. 395-400; Solovey (2013).

⁴ Campbell (1992), p. 2. By critical security studies, I mean the broad church of approaches which challenge the realist orthodoxy of mainstream security studies, and not the literature committed to ‘promoting emancipatory theory and practices of security’. Williams (2005), p. 136.

⁵ Corry (2012), p. 248.

as a useful category of analysis with its novelty as a category of political practice.⁶ In suggesting that risk is the ‘new’ security, or that risk has ‘replaced’ security in the post-Cold War era, CSS scholars misread history in the same way as those they criticise, namely the mainstream security studies theorists who claim that the ‘traditional’ focus of national security has been mitigating threatening actors. For example, Marc Levy and Daniel Deudney claim that there is little to be gained from studying the environment as a security issue, because it is intrinsically different from the ‘traditional focus of national security — interstate violence’.⁷ American policymakers perceived the Cold War world as full of risks, too; to them at least, risk management was no less ‘traditional’ a pathway to national security than threat mitigation.

This kind of argument will be familiar to students of Foucault; its conceptual scaffolding — which owes much to Goffman, and, to a lesser extent, Bourdieu — perhaps less so. Hence, it is worth clarifying what an analytics of government inspired by these two thinkers has to offer. If modern government is a ‘*problematizing* activity’, which ‘poses the obligations of rulers in terms of the problems they seek to address’, I have shown how particular problematisations resulted from the efforts of certain people, thereby foregrounding the role of human agency and contingency in the genesis of political rationalities.⁸ Goffman enables us to conceptualise that agency as a social performance, while Bourdieu’s notion of capital allows us to grasp how individuals leverage their social ties and cultural prestige to create performance opportunities. I used these ideas to carve out a different path from other scholarship on scientific expertise and modern government which draws on Foucault. In their studies of international

⁶ Aside from the 2008 special issue of *Security Dialogue* on ‘Security, Technologies of Risk, and the Political’ mentioned in Chapter 1, other special issues on risk in major IR journals only deal with post-1990 topics. For example, Jarvis and Griffiths (2007); Hameiri and Kühn (2011). Many standalone works on risk by IR scholars strongly imply it has only recently emerged as a category of political practice. For example, McLean et al. (2009); Neal (2009); Petersen (2011). An exception to this is Aradau (2012).

⁷ Deudney (1990), p. 461; Levy (1995).

⁸ Rose and Miller (1992), p. 181. Authors’ emphasis.

development, authors like Timothy Mitchell, Tania Li, and James Ferguson emphasise how expertise made ‘contentious issues technical’ — a process they call ‘depoliticisation’, or ‘anti-politics’.⁹ This aptly captures what happened at the sites of external intervention by actors like the United States, where expertise reframed controversial issues about how power, wealth, and resources should be distributed in and amongst societies as problems of optimisation. Discussions about nuclear testing within the US were likewise sanitised: talk of ‘clean’ bombs and ‘permissible’ doses of radiation exposure glossed over the immense destruction testing wrought on the biosphere, especially on the environs surrounding various proving grounds.¹⁰

At the sites where interventions into global governance objects were debated and designed, I revealed how expertise also made technical issues contentious. Performers of expertise interwove existing cultural material in novel ways legitimising particular courses of action over others. Their narratives implied that allowing global population to surge, Latin America to stagnate, and nuclear testing to proceed unabated would gravely risk US national security; it was therefore the responsibility of policymakers to intervene. At an earlier stage of problem definition and policy formation, these scientific narratives lent what Rose and Miller call ‘moral colour’ to political rationalities by ‘elaborat[ing] upon the fitting powers and duties for authorities’.¹¹ They changed how the US acted in the world: often indirectly, rarely completely, and not always for the better, but significantly nonetheless. Via population assistance to the developing world and economic assistance to Latin America, the US enacted

⁹ Ferguson (1994); Mitchell (2002); Li (2007). The phrase ‘contentious issues technical’ comes from Li (2007), p. 10.

¹⁰ See Cohn (1987). For a study of the impact of weapons testing on the Marshall Islands, see Parsons and Zaballa (2017).

¹¹ Rose and Miller (1992), pp. 178-179.

programmes of unprecedented scale and ambition to regulate ‘things’ previously deemed irrelevant to national security. Meanwhile, the Partial Test Ban Treaty encoded the view that nuclear bombs were not ‘just another’ weapon in America’s military arsenal, but posed a national security risk through the impact of fallout from testing on the biosphere.¹² The PTBT prevented the planet from becoming saturated with radioactivity, and constrained the development of evermore destructive weapons.

In the following, I first explain how this thesis contributes to three areas of scholarship: the study of US foreign policy, the study of global governance, and International Relations theory. Recognising the limitations of this study, I then identify a number of avenues for further research.

1. Contributions

To the study of US foreign policy

In a recent article, the historians Daniel Bessner and Fredrik Logevall call for the American state to be re-centred in the diplomatic historiography of US foreign relations. Starting in the 1990s, researchers ‘turned’ towards examining transnational and international influences on US behaviour.¹³ The resulting scholarship, while valuable, has ‘tacitly deemphasise[d]’ three important realities of postwar America: during this time, the US was the world’s most powerful actor, ‘and shaped the direction of global affairs more than any other nation’; the American state was the chief executor of foreign policy; and domestic politics influenced

¹² Lehman (2016).

¹³ Transnational scholarship focuses on networks that extend beyond state borders and their impact on US behaviour, while international scholarship focuses on the sites of US foreign policy intervention. Bessner and Logevall (2020), p. 39.

America's behaviour more than international processes.¹⁴ The authors argue that the 'domestic history of US foreign relations' has been neglected, especially the policymaking process and how it intersected with domestic political events like elections. This has left significant gaps in our understanding of the rise, orientation, and mechanics of the American national security state.¹⁵

This thesis examined experts who operated in and through US state institutions to shape the governance of global problems. I reconstructed their encounters with policymakers through a close reading of archival sources, and traced the consequences of those encounters for foreign policy. By attending to the domestic history of US foreign relations, I shed new light on how America practiced its preponderant power as a form of risk management. This section first explains how paying attention to discourses of danger as risk, and the regimes of practice created to manage those risks, offers a new perspective on two distinguishing features of postwar American hegemony which historians and IR scholars repeatedly return to: its liberal character, and its paranoid style. I then discuss the analytical payoffs of differentiating between discourses of danger as risk and danger as threat for students of US foreign policy.

Analyses of the relationship between liberalism and postwar US foreign policy typically treat liberalism as a political philosophy or ideology defining a set of values which, in turn, informs decision-making.¹⁶ In this vein, Ikenberry casts the US as a 'liberal Leviathan': the architect and guarantor of a consensus-based international order which institutionalised free markets, democracy, human rights.¹⁷ A more critical strand of scholarship exposes how American

¹⁴ Ibid.

¹⁵ Ibid. p. 42.

¹⁶ For example, Desch (2008); Lyon (2011); Green (2012); Mearsheimer (2019).

¹⁷ Ikenberry (2011).

policymakers exported those values in fundamentally illiberal ways, especially as they tried to ‘develop’ the so-called Third World: money for development bankrolled anti-Communist despots, as in Bolivia and the Dominican Republic, and modernisation was promoted in order to reinforce counterinsurgency efforts, as in Vietnam.¹⁸ On the ground in Third World countries, US development assistance often ‘promoted coercive policies, deepened inequality, and damaged fragile environments’.¹⁹

In contrast, I adopted a Foucauldian understanding of liberalism as a form of government characterised by ‘action at a distance’, which ‘identifies a domain outside “politics”, and seeks to manage it without destroying its existence and its autonomy’.²⁰ The policies considered in this thesis were all forms of action at a distance. With population assistance, the US did not directly interfere in individuals’ reproductive decisions, but instead encouraged governments in developing countries to create a policy framework within which citizens would elect to have fewer children. With the Alliance for Progress, American officials did not try to alleviate poverty through supplies of food and medicine, but instead financed investments in capital and infrastructure to stimulate Latin American ‘self-help’. A principal goal of the Partial Test Ban Treaty was not to protect nature from humankind, but to improve the conditions for human life by removing a source of harmful radioactive activity from nature.

Approaching liberalism as a ‘logic of governing’ instead of as an ideology eschews blanket assessments of American policymakers as hypocrites, or of ‘liberalism’ as a facade for US expansionism and power maximisation, in favour of a more nuanced appraisal of US actions in the developing world. The crumbling of an initiative like the Alliance for Progress did not

¹⁸ See Ekbladh (2011), Chapter 6; Sackley (2011); Darden (2019).

¹⁹ Latham (2010), p. 6.

²⁰ Rose and Miller (1992), p. 180.

reveal the fundamental insincerity of its designers so much as show how, without formal mechanisms for disbursing development assistance, risk management was subordinated to threat mitigation in America's 'backyard'. Meanwhile, liberal government — which aims to optimise aggregate 'things' like populations and economies by 'structuring the field of possible action' of subjects — is entirely consistent with a disregard for actual people.²¹ This is most evident in the case of population assistance, in which 'calibrations of human worth' by American policymakers were 'removed from consideration of any specific actual life'.²² In the heyday of population control in developing countries, women's bodies were reduced to sites of experimentation to find the most cost-effective contraceptive, often compromising their health and autonomy in the process.²³

The second feature of postwar American hegemony was its paranoia. For most of the Cold War, the US was 'objectively safe from external attack, as safe as any nation could realistically hope to be'.²⁴ Yet, from their position of relative security, American leaders saw danger everywhere. That they grew increasingly wary of the USSR is not especially surprising. But the same officials charged with containing the Soviet Union also fretted over the reproductive choices of women in places like India and Bangladesh, the low wages of Colombians, and the irradiated marine ecologies of remote Pacific islands. There was no immediately obvious, natural connection between these issues and national security, no reason why they should appear so dangerous, but the anxiety they provoked crossed party lines, and was sustained over several administrations. Scientific narratives made these disparate events legible to

²¹ Foucault (1983), p. 222.

²² Murphy (2017), p. 42.

²³ Contraceptives were often tested on developing world subjects before they were approved for distribution in developed countries, so women in the Third World bore the burden of malfunctioning and dangerous devices. See Hartmann (1987), Chapters 10-13.

²⁴ Craig and Logevall (2009), p. 11.

policymakers as portents of an undesirable future. In articulating danger in terms of risk, they stoked paranoia by representing the source of danger as ineradicable. National security risks could only be managed, and thus demanded constant vigilance. This manifested in the vast enterprises to generate anticipatory knowledge — harvesting more data to extrapolate from, and devising more elaborate and speculative techniques of prospection — and in the array of anticipatory practices that intervened in the present in order to control the future.²⁵

Distinguishing between political rationalities oriented towards danger as threat and those oriented towards danger as risk sharpens our understanding of American foreign policy in ‘its’ century.²⁶ First, it allows us to see how initiatives to ‘develop’ the Third World — either through population control or nurturing ‘self-sustaining’ economies — achieved America’s national security objectives, without reducing those initiatives to an extension of its drive to contain the Soviet threat. At the same time, national security risks were not defined in isolation from national security threats: as they urged policymakers to take action, performers of expertise stressed that the Soviets would capitalise on mismanaged risks to expand their sphere of influence. Second, some policy outcomes can be understood as the consequence of trying to solve for risks and threats simultaneously. During the debates leading up to the Partial Test Ban Treaty, two contrasting representations of nuclear testing — as a national security risk through the impact of fallout on the biosphere, and as a key component in defending against a national security threat — tugged policymakers in opposing directions. To assuage the concerns of the Joint Chiefs of Staff and Congress that a test ban treaty would leave the US

²⁵ Rose (2001), p. 7.

²⁶ This references Henry Luce’s famous essay, ‘The American Century’. Writing in 1939, Luce arguably foreshadowed postwar discourses of danger as risk when he declared: ‘American cannot be responsible for the good behaviour of the entire world. But America is responsible, to herself as well as to history, for the world-environment in which she lives. Nothing can so vitally affect America’s environment as America’s own influence upon it, and therefore if America’s environment is unfavourable to the growth of American life, then America has nobody to blame so deeply as she must blame herself’. Luce (1999), p. 166.

more vulnerable to a Soviet attack, the Kennedy administration promised an expanded programme of nuclear weapons development. The world's first treaty to manage the biosphere therefore had the perverse effect of accelerating the arms race between the superpowers.

To global governance scholarship

By exercising its preponderant power as risk management, America was a pivotal force in shaping contemporary global governance arrangements — not just by establishing the formal institutions that anchored those arrangements, but also by defining the very problems that those arrangements addressed. This brings me to the second contribution of my thesis: to initiate a productive dialogue between foreign policy and global governance scholarship by highlighting the links between the foreign policies of certain states at certain times, and the political rationalities expressed in contemporary global governance arrangements. Tracing these connections helps us identify what makes global governance distinctive: both from coexisting forms of rule, such as those practiced by states within their territories, and past forms of rule, such as feudalism or empire.

There is an unspoken consensus in IR that foreign policy and global governance should be studied separately because they are categorically different modes of political action. Foreign policy is how states realise their narrow self-interests and is shaped by ideology, bureaucratic struggles, domestic politics, and material constraints in the international environment. Global governance, meanwhile, tries to regulate public goods like oceans and the atmosphere in the interests of all. It is an arena where diverse actors collaborate to tackle vexing transnational problems like climate change and pandemics, while the state is increasingly sidelined.

One reason for the lack of exchange between these two fields is that we have written out the history of the state in contemporary global governance. I view this as the byproduct of two

scholastic tendencies, both of which this thesis challenged. The first tendency is to define global governance as ‘governance without government’: systems of rule which are not underwritten by a centralised legal authority with the independent capacity to enforce compliance within a geographically bounded territory.²⁷ More recent definitions by prominent IR scholars continue to entrench the view that global governance begins where the state ends.²⁸ Empirical research accordingly prioritises the ‘vast nexus’ of actors — intergovernmental and regional organisations, transnational advocacy networks, corporations, and NGOs — that operate outside of, above, and occasionally in opposition to state institutions, over those that work within or through them.²⁹

The second tendency is to tell the story of contemporary global governance as the decline of state power. Historical accounts of the ascendance of the so-called ‘global governance system’ after 1945 emphasise the progressive ‘unravelling’ or ‘displacement’ of the nation-state, hastened by the end of the Cold War.³⁰ For example, Martin van Creveld claims that the state, which reached its ‘commanding heights’ after World War II, has been in retreat since approximately 1975, when crucial functions like ‘guaranteeing the life and property of their citizens’ were ‘increasingly delegated to other organisations’.³¹ Accounts like his reduce the

²⁷ This is James Rosenau’s seminal formulation. See Rosenau (1992). Ruggie (2014) also adopts this definition.

²⁸ Michael Zürn, for example, defines global governance as ‘the exercise of authority across national borders as well as consented norms and rules beyond the nation state, both of them justified with reference to common goods and transnational problems’. Zürn (2018), p. 24. To Thomas Weiss, it denotes ‘collective efforts to identify, understand, or address worldwide problems that go beyond the capacities of individual states to solve; it reflects the capacity of the international system...to provide government-like services in the absence of world government’. Weiss (2013), p. 32.

²⁹ Held and McGrew (2002).

³⁰ Hooghe and Marks (2003).

³¹ Van Creveld (1999), p. 416. Other notable works which take this approach include Strange (1996); Matthews (1997); McGrew (2004).

role of the US to an underwriter, who used its military and economic might to prop up a system it proved increasingly unable to control.

This literature reminds us that international order-*ing* is more varied and complex than state-centric analyses suggest, and adds particular value by recasting global politics as a set of hierarchical relations of super- and subordination between diverse actors.³² However, the vision of global politics it imparts begins to resemble neo-realists' depictions of national politics: 'the realm of authority, of administration and law', as Waltz describes it.³³ Forfeiting the assumption that anarchy is the ordering principle of international life has been a productive move for global governance scholars, but leaves an ambiguity at the heart of their work: if global governance is, on the one hand, beyond or in opposition to the state, yet in practice, bears a strong resemblance to it, then what is global governance, and how does it differ from other forms of rule?

Instead of being linked to a specific set of actors, activities, or issues, Olaf Corry suggests that we reimagine global governance as a form of political rule premised on an understanding of the world as one place.³⁴ I developed this idea further and suggested that global governance is governance at a global *scale*. Global governance scholars tend to assert that the world *is* one place by highlighting how globalisation has increased integration and interdependence between different localities. 'Global' functions as a shorthand for any problem or form of political response to it that appears to be bigger, or above, IR's traditional unit of analysis: the nation-state. Overlooked are the processes by which we have come to know and talk about

³² See, for example, Lake (2010, 2012); Zürn (2018), Chapter 6. For a critical review, see Sending and Neumann (2006), pp. 653-655.

³³ Waltz (1979), p. 113.

³⁴ Corry (2013), p. 57.

the world *as* one place, or what that implies for what we can govern, and how. An expansive literature outside of IR has problematised the national scale by showing that the nation-state is not an ontological given, but the product of historical discourses.³⁵ By paying attention to scientific narratives, and, especially, the processes by which global governance objects are abstracted from specific events or data in order to form these narratives, we can apprehend how the global scale is similarly ‘assembled, made recognisable, and stabilised’ through discourse and practice.³⁶

I explored two distinct renderings of the global scale and how they enabled new kinds of political action. The first rendering is as a world consisting of commensurable, or ‘like’ units: national economies in the case of modernisation theorists and economic assistance to Latin America, and national populations in the case of population scientists and population assistance to the developing world. The stages of growth model and demographic transition theory expressed the differences amongst national economies and national populations respectively in temporal terms — countries occupied different places along a single evolutionary trajectory. Many these countries passing through the same stage simultaneously created a global risk — a ‘revolution of rising expectations’, or a ‘population explosion’ — which could be addressed by the same set of interventions, regardless of the unique circumstances of each country. What made these interventions global in scale was not that they were universally applied, but that they were universally applicable.³⁷

³⁵ Much of this work comes from anthropology. Two of the best known examples are Anderson (1983) and Gellner (1983).

³⁶ Carr and Lempert (2016), p. 10.

³⁷ See Coleman (2019), pp. 223-238.

The second rendering of the global scale is as a world that hangs together by common forces: a ‘planetary imaginary’, as Joseph Masco terms it.³⁸ This was the conception of the biosphere that structured the nuclear testing debates, and partially justified the Partial Test Ban Treaty. Because all habitats and lifeforms on Earth were linked by shared biological and ecological pathways, the hazards of radioactive fallout could not be contained by conducting tests in isolated locations. Harmful radioactivity accumulated slowly and manifested insidiously, but would eventually be felt everywhere: this global scale was that of a planet inextricably connected, and indivisibly vulnerable.

The case studies in this thesis demonstrated how the scaling up of global governance objects took place within, or in conjunction with, state institutions, and how foreign policy was an important instrument for realising and practicing global scales. Put differently, a close reading of foreign policy history denaturalises the global scale. It enhances our understanding of how global governance objects, which today are deeply engrained in our ways of talking and acting, came to be. As Burger and Gadinger remind us, ‘the world depends on practice’: governance objects ‘are real because they are part of practices, and are enacted in them’.³⁹ In articulating national security risks, performances of expertise spurred US policymakers to legitimise and invest in a host of practices — from disseminating contraceptives, to funding factory equipment purchases, to conducting atmospheric sampling — which reified national populations, economies, and the biosphere as global governance objects. While the world has moved on from simplistic stories about overpopulation and underdevelopment, and nuclear fallout from testing is no longer a major concern (although fallout from nuclear war and

³⁸ Masco (2014).

³⁹ Burger and Gadinger (2015), p. 453.

accidents still is), the objects at the centre of those narratives endure as loci for political action and contestation.

To IR theory

I define my contributions to IR theory in terms of three ‘moves’: away from an ‘actor-first’ theory of experts and towards an ‘action-first’ theory of expertise; away from a singular focus on rhetoric and towards analysing utterances designed to effect political change as part of an overall drama; and, finally, to prise ‘risk’ from the grip of securitisation theory, and study it as a distinct representation of danger.

From experts to expertise

I developed a relational theory of expertise as an alternative to existing theories of experts. I treated ‘expert’ as a role identity and ‘expertise’ as the performance of that identity. Expertise is a dramatic effect created through action, rather than an attribute of an actor. Consequently, my empirical investigations began with the activity: teams of individuals coming together in particular times and places to stage performances that convey a narrative to an audience. These individuals did not necessarily form a stable epistemic community, nor did their impact derive from the strength, integrity, or persistence of their beliefs. Rather than take the notion that experts speak ‘truth to power’ at face value, as epistemic community theory does, I studied it as an impression that the individuals who wanted to be recognised as experts strove to maintain in their encounters with others. I disassembled performances of expertise into front stage and backstage, and analysed practices of stage management and boundary work, not to expose historical figures as charlatans, but to foreground how their agency was ‘a practical accomplishment’.⁴⁰ The consequences of that agency were understood by tracing

⁴⁰ Braun et al. (2019), p. 787–807.

the extent to which scientific narratives redrew the boundaries around permissible action, and how those boundaries were contested and reconfigured over time. I thereby explained how scientific expertise changed US foreign policy without reducing ‘experts’ to unthinking repositories for agglomerations of beliefs, and without recourse to implicit normative claims about the inherent superiority of some ideas over others.

To explain how my theory contributes to the broader shift from experts to expertise in IR theory, I concentrate on Sending’s argument in *The Politics of Expertise*. While other recent scholarship has considered aspects of expertise, such as Aurel Niederberger’s study of how UN sanctions experts practice role distancing (navigating ambivalent situations by signalling disaffection from a role), and Annabelle Littoz-Monnet’s work on how bioethical experts calibrate their self-presentation to policymakers’ needs, Sending comprehensively deconstructs the epistemic authority that epistemic community theory takes for granted.⁴¹ Adapting Bourdieu’s concepts of *field* and *capital*, he argues that epistemic authority in a given domain results from a struggle for recognition between contending factions of knowledge producers. He considers how epistemic authority is contested; I consider how, once those contests are temporarily settled, individuals *capitalise* on their victory to engage with those who claim political authority, i.e., policymakers. In one sense, my theory begins where his ends, except that I also factor in how performances of expertise before non-expert audiences help individuals accrue further capital when well-received, and depreciate it when not. Sending acknowledges this phenomenon — the conversion of recognition from policymakers into

⁴¹ Niederberger (2020); Littoz-Monnet (2020).

capital for experts — at work in his case study on the competition for authority in the field of population, but does not theorise it.⁴²

I extend Sending's framework by elucidating one process through which 'governing' happens as those who claim epistemic authority engage with those who claim political authority. Sending defines a field as a social space organised around a shared understanding of a governance object.⁴³ However, governance is about acting as well as knowing. It follows that the field which surrounds a governance object is characterised by contests over epistemic authority *and* contests over political authority. The latter is the recognised capacity to orchestrate the regimes of practice associated with that object, and direct attention and resources towards its management. By problematising issues as national security risks, scientific narratives, in effect, propose to redraw the boundaries of political authority (and, therefore, the roles of those who claim political authority). In turn, by accepting responsibility for managing a national security risk, policymakers affirm the regime of intelligibility underlying it, and, therefore, the epistemic authority of the group that shaped that regime.

From rhetoric to drama

This theoretical advance is closely linked to the previous one. IR scholars working in the constructivist tradition have increasingly focussed on the strategic use of language in political settings. They reject the 'liberal constructivist' view of communication as descriptive or deliberative, and propose instead that it is rhetorical.⁴⁴ Participants in politics are not merely

⁴² He writes that 'recognition by policymakers or actors with resources to help initiate action programmes that came to serve as the central criterion in determining which knowledge claims became authoritative'. Sending (2015), p. 86.

⁴³ Ibid. p. 22. His definition therefore differs somewhat from Bourdieu's original meaning of the term as social spaces organised around the struggle for a certain type of capital.

⁴⁴ Jackson and Nexon (2009).

relaying their perception of events, or seeking consensus regarding the truth. Instead, they are trying to convert others to their point of view in order to advance their agenda.⁴⁵ The latest twist in the rhetorical ‘turn’ in IR is the embrace of strategic narratives as a analytical device: these are ‘compelling storylines which can explain events convincingly and from which inferences can be drawn’.⁴⁶ Lawrence Freedman, who coined the term, chose ‘strategic’ to emphasise the calculated, deliberate nature of narrative construction. However, the literature he inspired has prioritised explicating different types of strategic narrative and their causal effects over theorising the dynamics behind their formation.⁴⁷

The theory of expertise I advanced situated one type of strategic narrative — scientific narratives — in an overall dramatic spectacle. By scrutinising how performers adapt to the stage they appear on and manage how their audience perceives them, a dramaturgical approach equips us to analyse the calculated, reflexive nature of social action. It links the practice literature’s interest in patterned, competent performances by practitioners, with the literature on rhetoric’s interest in how those practitioners manipulate discourse to achieve strategic objectives, in a symbolic interactionist framework which allows us to understand how certain outcomes eventuate.⁴⁸

Focusing on rhetoric alone produces a shallow understanding of how actors’ creativity ‘emerges in connection with problematic situations of action’.⁴⁹ Embedding rhetoric in drama

⁴⁵ For example, Payne (2001); Schimmelfenning (2001); Joachim (2003); Mattern (2004, 2005); Jackson (2006); Roberts (2006); Krebs and Jackson (2007); Kornprobst (2009); Goddard and Krebs (2015); Krebs (2015); Petrova (2016); Senn (2017); Abulof and Kornprobst (2017); Mahoney (2017); van de Wetering (2017).

⁴⁶ Freedman (2006), p. 22.

⁴⁷ Freedman (2015), p. 19. Work on strategic narratives includes Miskimmon et al. (2013, 2018); Krebs (2015); de Graaf et al. (2015); van Noort and Colley (2020). Most of this literature examines narratives constructed by state actors.

⁴⁸ On practices as competent performances, see Adler and Pouliot (2011).

⁴⁹ Joas (2015), p. 568.

allows us to appreciate how the roles that people assume enable and constrain narration: someone speaking as a religious leader can make claims that would be untenable for someone speaking as a scientific expert, and vice versa. In crafting their narratives, people also invoke the roles of others: in articulating national security risks, performances of expertise urge policymakers to do more, or do differently, in order to discharge their fundamental responsibility of securing the nation from harm. As Bucher and Jasper note, ‘identifications are acts of demarcation and differentiation’: attending to practices of stage management and boundary maintenance foregrounds how the role of an expert does not precede action, but is instead instantiated through action.⁵⁰ That action, moreover, encompasses more than speech: the rhetoric of performance can be enhanced by, or expressed through, artefacts — the reports, visualisations, etcetera — whose substance is often secondary to the impression they help sustain. Finally, the possibilities for action are always conditioned by the communicative setting: the rigid format of a Senate committee hearing, for instance, creates different opportunities and constraints for the performer than an intimate discussion behind closed doors.

From securitisation to ‘riskification’⁵¹

The case studies in this thesis compared the explanatory utility of my theory of expertise to Bentley Allan’s theory of experts, which draws heavily on securitisation theory. Allan joins a large contingent of scholars who have used securitisation theory to analyse the social construction of danger. This thesis can be read as a caution to researchers against automatically doing so whenever a new phenomenon appears to have become a security issue.

⁵⁰ Bucher and Jasper (2016), p. 397.

⁵¹ ‘Riskification’ is a term used in Corry (2012).

In essence, securitisation theory holds that securitisation occurs when an actor alerts an audience to a source of direct, existential harm to a valued referent object, such as the nation, and convinces them that it can only be countered via extraordinary measures which break with ‘normal’ politics: ‘by labelling something as “security”, an issue is dramatised as a matter of supreme priority’.⁵² Some events, like the coronavirus pandemic, are well-suited to analysis using this framework. To stop the disease from spreading, national governments imposed exceptional restrictions on their citizens’ freedoms, ‘breaking the rules’ in order to save lives.⁵³ This thesis demonstrated that not all forms of insecurity are framed as an ‘existential threat’, and not all responses to insecurity take the form of ‘extraordinary countermeasures’. In the US, crafting responses to the problems of overpopulation, underdevelopment, and radioactive fallout followed routine — and often frustrating — processes of executive deliberation and legislative wrangling. I am not arguing that securitisation theory only applies to certain domains; rather, it is better at explaining certain kinds of outcomes than others. For instance, it helps us grasp how governments justify invasive surveillance tactics to prevent acts of terrorism, but offers less insight into the emergence of regimes of intelligibility which identify segments of the population as being at greater risk of radicalisation, or how regimes of practice to manage that risk are institutionalised via conventional political processes.⁵⁴

Critics of securitisation theory’s preoccupation with the politics of emergency propose to broaden its scope to consider routine securitisation practices, such as in airports, or define risk as the process by which exceptional measures are made permanent features of the political

⁵² Van Munster (2012). This follows the Copenhagen School’s original definition of securitisation as a discursive act; alternative approaches are addressed below.

⁵³ See Kirk and McDonald (2021).

⁵⁴ The UK’s Counter Terrorism and Security Act exemplifies the latter. It creates a statutory duty for educators, social services, and other ‘front-line’ organisations to identify and refer vulnerable individuals ‘at risk of radicalisation’ to law enforcement for ‘safeguarding’. See O’Donnell (2015).

landscape.⁵⁵ Following Corry, Claudia Aradau, and others, I argue that risk ought to be analysed as a distinct way of articulating danger — as a configuration of conditions that increases the likelihood of harm to a valued collectivity.⁵⁶ Risk management attempts to reshape those conditions through long-term programmes of intervention. My work contributes to the IR literature on risk by theorising a process via which specific articulations of risk enter into general circulation within a political community and legitimise new forms of political action. While national security apparatuses may enlarge suddenly during periods of emergency, through ‘riskification’ they can expand stealthily during ‘normal’ times as well.

2. Avenues for further research

I identify several avenues for further research. First, this thesis focused on performances of scientific expertise that took place in America during the early Cold War period. Applying my theoretical framework to performances of expertise before other governments, intergovernmental organisations, and transnational forums would enable a comparison of how performers adapt to different ‘stages’, that is, different configurations of access points, institutional contexts, and audiences. Following teams of performers who appear before different kinds of political authorities permits further exploration of how social and cultural capital is acquired and expended to create performance opportunities. The scientific narratives I studied were designed to influence US foreign policy, hence framed danger in terms of risks to national security and assigned American policymakers responsibility for intervening to protect ‘the nation’ from harm. How do scientific narratives that target other

⁵⁵ Corry (2012), p. 244-245. The Paris School of securitisation theory focuses on routine securitisation practices. See Bigo (2006) for a foundational text and Bourbeau (2014) for a literature review and comparison with the Copenhagen School. On airports, see Salter (2008).

⁵⁶ Ole Wæver, one of the original proponents of securitisation theory, appears to endorse this approach when he states ‘securitisation is securitisation, and risk is risk’. Wæver (2011), p. 474.

authorities construct a dissonance between their role and their actions in order to elicit a response?

Second, because of the time period studied, the performances of expertise I analysed were recreated from textual sources, including letters, transcripts, and memoranda. This limits what can be analysed. A reliance on text inevitably privileges aspects of performances of expertise which are better conveyed through this medium, such as chains of reasoning, over other aspects that could also be important, like gesture and affect. Studies of more recent events should be able to draw on a more diverse range of source material to reconstruct performances, like audio recordings and video footage, allowing us to better appreciate their paralinguistic effects, as well as how artefacts are used to enhance a performance's overall message. Or, researchers can observe performances of expertise directly, as with James Shires' recent study of ritual reenactment by cybersecurity professionals at industry conferences.⁵⁷

Finally, it has become fashionable to declare that America is now a 'post-truth' society. Those making such pronouncements generally mean that disinformation clutters the public sphere and the emotive rhetoric of populists has greater appeal than reason.⁵⁸ In this society, so the argument goes, there is a diminished role for the kinds of experts I wrote about: pedigreed luminaries operating out of elite institutions, who were comfortable walking the corridors of power.⁵⁹ Instead, we find hawkers of 'alternative facts' who win large audiences by challenging, in pseudoscientific terms, knowledge claims settled by decades of peer-reviewed research.

⁵⁷ Shires (2018).

⁵⁸ See Malcolm (2021) for a review of what commentators mean by 'post-truth'.

⁵⁹ See Lockie (2017), p. 1.

Something has indeed changed, but it is not the relationship between expertise and ‘the truth’, which has historically also been secondary to the imperative to provide clarity. To claim otherwise is to misread the past, and I believe that there are more productive ways to parse the present. Here are two possibilities. First, the kinds of experts I wrote about still exist, of course, but they no longer monopolise epistemic authority as they did in postwar America. This tells us that the forms of social and cultural capital that performers of expertise can acquire and leverage have diversified. Modernisation theorists, population scientists, and nuclear scientists amassed their capital from the constant interchange between the federal government and academia that was set in motion by World War II. Today, working for, or with, corporations, think tanks, and non-profits also enables capital accumulation which can then be converted into performance opportunities before policymakers or the public. Scientific expertise backed by corporations, for instance, has shaped the global governance of the climate, food, and human health.⁶⁰ What practices do experts affiliated with these entities implement in order to reproduce the boundary between ‘scientific’ and ‘non-scientific’ activity?

Second, alternative facts are still presented as facts: we live in an era of pseudoscience as well as anti-science. For example, climate change deniers may be motivated by conservative political ideology or the financial inducements of the fossil fuel industry, but these motivations do not surface in their public arguments.⁶¹ Instead, they also self-present as dispassionate truth-seekers. Their performances ‘de-risk’ climate change by questioning the data, methods, and conclusions of mainstream climate science in conference presentations and journal

⁶⁰ See Clapp and Fuchs (2009); Oreskes and Conway (2011).

⁶¹ See McCright and Dunlap (2010).

articles.⁶² They establish alternative networks for gathering anticipatory knowledge and adapt conventional techniques of prospection to represent it.⁶³ The result has been to seriously hamper the US's response to climate change in the past two decades and derail multilateral coordination to mitigate its effects.⁶⁴ This tells us that the basic template of the scientific narrative retains political currency, as do the qualities of objectivity and anticipation that characterise performances of scientific expertise. We should investigate how both are appropriated to serve pernicious ends. To study expertise as a dramatic effect is not to place all scientific narratives on equal footing, nor does it imply that all experts are equally deserving of our attention. By employing my framework to study how individuals are empowered to intervene in politics by enacting expertise, we are alerted to the potential for this expertise to be manipulated.

⁶² Dunlap and McCright (2011), p. 146-147; Dunlap and Jacques (2013); Fischer (2019), p. 146.

⁶³ Schneider et al. (2014). See Lee (2021) for similar methods used by coronavirus sceptics.

⁶⁴ See McCright and Dunlap (2003); Selby (2019).

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