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**Structures for Strategy: Institutional Preconditions for Long-Range
Planning in Cross-Country Perspective**

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ABSTRACT

From climate change to economic instability, a range of persistent interdisciplinary challenges has heightened calls for a more integrative approach to policy planning in the US federal government. Long-range planning processes are still largely compartmentalized within executive branch departments. While much of the literature on US planning attributes the absence of systematic coordination in long-term policy planning to several characteristics inherent in modern representative governments including frequent electoral turnover, bureaucratic competition for influence, pervasive media leaks, and difficulty accruing political gains from crisis prevention, such analyses fail to account for why other representative governments including the United Kingdom have established more centralized strategic planning architecture. The UK Government created a National Foresight Programme in 1994 to track multidisciplinary long-range issues related to innovation and a Horizon Scanning Centre in 2004 to coordinate priority-setting, risk assessment, and strategy formation across a range of departmental jurisdictions. Drawing on interviews with government officials and analysis of organizational arrangements, speeches, and memoranda, this paper seeks to investigate why the US federal government maintains a compartmentalized framework for strategic planning while the UK has adopted a more centrally-coordinated framework. By briefly comparing a series of secondary case studies including Brazil, India, South Korea, and Singapore, the paper seeks to identify a more general set of institutional preconditions for the development of interdisciplinary planning programs at the national level.

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Structures for Strategy: Institutional Preconditions for Long-Range Planning in Cross-Country Perspective

INTRODUCTION

“...nobody who has not watched policy expressing itself in day-to-day action can realize how seldom is the course of events determined by deliberately planned purpose”

–Sir Harold Nicholson

“The urgent too often crowds out the important.”

-Amy Zegart

1.1 Research Questions

How do governments identify and manage multidisciplinary future contingencies? This question has grown in salience amidst accelerating environmental, technological, and economic change and in the wake of conspicuous failures to anticipate the collapse of the Soviet Union, the September 11th attacks, and the SARS outbreak. While political leaders in more than a dozen countries have invested resources or clearly articulated interest in developing institutional architecture to undertake coordinated long-range planning (Glenn 2009), several, including the United States, maintain a piecemeal approach with foresight operations rigidly partitioned between government agencies. Zegart (2009) and Jentleson (2009) attribute the lack of coordination in US strategic planning to a range of constraints including: bureaucracies’ competition for influence; difficulty accruing political gains from attention to long range issues; fear of leaks in open and permissive planning processes; cognitive barriers to analysis of the future; and cultural divides between planning and operational personnel. Nonetheless, the United Kingdom, which notably faces each of these constraints in some form, has developed an archetypical coordinated system for strategic planning.

What accounts for this disparity? Generally, why do some countries develop integrated institutional structures for strategic planning while others rely on discrete elements dispersed across their governments? The literature on comparative governmental institutions offers viable answers. In particular, institutionalists including

Linz (1994) and Moe and Caldwell (1994) argue that the emergence of most policymaking processes can be attributed to characteristics inherent in parliamentary or presidential systems including separation or fusion of powers, relative autonomy of the executive, and the role of civil servants. Cohen, McCubbins, and Rosenbluth (1995) similarly illustrate the intuitive notion that patterns of regional authority (i.e. whether a country adopts a unitary or federal structure) strongly affects a wide range of policymaking processes and outcomes.

This paper will argue that such institutional variables are important determinants of a country's strategic planning architecture, and, specifically, that unitary parliamentary systems are most likely to facilitate an integrated framework for national policy foresight. *Prima facie*, however, particular noninstitutionalist variables including country size and degree of partisan competition are equally efficacious in explaining the presence or absence of coordinated national strategic planning architecture. The paper will begin by examining the long-range national planning architecture in the US and UK and narrow down possible explanations for the difference to institutional and some non-institutional factors. To compensate for major contextual differences between the US and UK and to eliminate spurious explanations derived from the idiosyncrasies of the two cases, the paper will proceed to assess how well the identified factors account for frameworks in four other countries of varying governmental type, level of regional autonomy, size, and degree of partisan competition. The paper does not address case studies of all countries with clearly-stated interest in developing policy foresight capabilities; others are therefore encouraged to further refine the analysis through the addition of other country experiences.

1.2 Defining Policy Foresight

Whether through a leader's personal vision, informal consensus in a policymaking community, or a systematic research process involving broader stakeholders, virtually all governments conceive of 'strategic direction,' identifying desired futures as well as means of bringing them to fruition (Stonebridge and Roberts 2007: 2). The perception has grown steadily throughout the second half of the 20th Century, particularly in large industrialized country governments, that the complexity of global affairs and growth of

the formal discipline of decision sciences necessitates reliance on systematic processes rather than the whims of an ideological cadre or chief executive. In recent years, many commentators including Fuerth (2006) and Fukuyama (2008) have cited geopolitical ‘shocks’ such as political violence by nonstate actors, the rise of genetically modified foods, and health crises such as Bovine spongiform encephalopathy (BSE) and Severe Acute Respiratory Syndrome (SARS) as evidence of an acceleration in the rate of incidence of major social, technological, and political change, and, accordingly, of the need for more extensive and rigorous government analysis of alternative futures. This novel requirement, often termed *horizon scanning*, *policy foresight*, or *interagency strategic planning*, has received considerable attention from scholars and practitioners including Bracken, Bremmer, and Gordon (2008), Fukuyama (2008), Lempert (2008), and Flournoy and Brimley (2006), but it generally remains ill-defined.

What specific and novel requisites and capabilities do the above terms describe? Habegger aggregates definitions from several governments and international agencies to distill a common denominator of policy foresight: tools and methods that ‘systematically gather a broad range of information about emerging issues and trends in an organization’s political, economic, social, technological, or ecological environment’ (Habegger 2009: 5). Friedberg adds three specific core functions: (1) weighing alternative strategies, (2) assessing current strategy, (3) and investigating high-impact contingencies (Friedberg 2009: 57). More broadly, these authors posit that organizations generally establish foresight programs to build effective policies and organizational or national resilience in the face of various future contingencies. The literature on contemporary government foresight programs also heavily emphasizes the importance of three elements related to organizational learning and reflection including: (1) harnessing information from a diverse array of sources, (2) fostering a culture of information sharing and operational collaboration, and (3) continually challenging policymakers’ operating assumptions and conceptual frameworks. Government foresight can thus be perceived as pertaining to two broad objectives: delivering ‘information on future developments as a basis for priority setting’ and engaging policy makers in ‘reflexive mutual learning’ processes (Da Costa *et al.* 2008: 373-376). Based on the aforementioned dichotomy, this paper will define policy foresight in terms of two categories: *policy functions* (harnessing information and

perspectives in support of high-level priority setting) and *heuristic functions* (cross-government programs to support the development of future-oriented knowledge networks and anticipatory mindsets).

1.2.1 Policy Functions

For centuries, political leaders have relied on expert advice to assess threats and opportunities as well as to assess the consequences of prospective actions. Policy functions are highly systematized efforts to perform such tasks, generally by aggregating views or data into products such as scenarios or contingency scans to support priority-setting and decision-making. Maximizing the scope and diversity of information sources is widely seen as integral to effectively crafting such products (Ramakrishna, personal communication, 3rd March 2009). Accordingly, most of the foresight programs identified in the literature collaborate with academic, nongovernmental, and private sector experts both to safeguard reputations and to encompass differing, even incongruous perspectives. Government officials in Singapore, for instance, frequently cite Surowiecki (2004) to substantiate the view that perspectives aggregated from large and varied groups often have greater predictive power than those of individual experts (Ramakrishna, personal communication, 3rd March 2009). Yet the great proliferation of information sources (e.g. internet, mobile communication, and signal intelligence) may also, paradoxically, contribute to a sense of increasing and perhaps overwhelming complexity (Habegger 2009: 79). The most recent wave of future-oriented government strategy programs (from the late 1990s on) has therefore centered on efforts to improve information filtering and discernment of multidisciplinary patterns and ‘weak signals’ that could portend major trends and events. Government strategy officials in Singapore illustrate the utility of such programs by citing the instance of SARS in which analysts needed to ‘connect the dots’ between matching points (e.g. ill incoming airline passengers, anomalous lab reports, foreign governments’ warnings) in the multitude of intelligence collected from immigration authorities, the Ministry of Health, the Ministry of Foreign Affairs, and others to make sense of the possible ramifications of a pandemic and formulate effective contingency plans (Ramakrishna, personal communication, 3rd March 2009). The emphasis on analysis cutting across government departments and policy areas reflects the

need to overcome the problem of government agencies scanning only for future contingencies of their own jurisdictional concern as well as the need to provide senior decision-makers with nuanced interdisciplinary analysis.

1.2.2 Heuristic Functions

The development of foresight capabilities is widely considered a catalyst of cultural as well as organizational shifts within a bureaucracy (Schultz, personal communication, 3rd April 2010). Certain functions including cross-government training in futures methodologies and interdepartmental consultancy on long-range issues explicitly facilitate such shifts. Beyond identifying future trends and contingencies, both Krasner (2009) and Feaver (2009) describe such elements of strategic planning as playing a ‘heuristic’ role focused on fostering an instinct to share information as well as improve analysts’ pattern recognition and reinterpretation of past and current issues and actions (Krasner 2009: 162). Crafting future scenarios may, in the words of futurist Pierre Wack, ‘help change assumptions about how the world works’ and ‘compel people to reorganize their mental models of reality’ (Lempert 2008: 110). Governments, including the UK and Singapore, frequently cite such heuristic functions as rationales for using futures programs to train officials to deal with situations characterized by rapid change or great uncertainty (Ramakrishna, personal communication, 3rd March 2009).

1.2.3 Constituting ‘long-range’

While notions of what constitutes ‘long-range’ differ significantly, most scholars and practitioners agree that a program must have a mandate to analyze contingencies at least beyond the end of the current term of government to merit designation as foresight-oriented. Temporal range may differ drastically depending on the nature of the question being analyzed: Leigh argues that, for environmental threats, a range of one to two generations may be appropriate while for financial scenarios one to four years may suffice (Leigh 2003: 5).

1.3 Defining Institutional Categories

Further clarity is required on the question of what constitutes the categories of institutional variables. Shugart and Haggard classify parliamentary and presidential governments according to: (1) whether the cabinet and executive agencies are accountable to a parliament or president; (2) whether the president is a popularly elected head of government or a largely ceremonial head of state; (3) whether terms and elections are flexible or pre-determined; and (4) whether the executive holds veto power (Shugart and Haggard 2001: 68). According to their formulation, in 'pure' parliamentary systems, 'cabinets are accountable to the assembly majority, the assembly can be dissolved before the completion of a full term, and only the lower (or sole) house of parliament has veto power' (Shugart and Haggard 2001: 68). In 'pure' presidential governments, terms are rigidly fixed, and executive agencies are accountable to a popularly elected president, who possesses veto power but cannot dissolve the legislature (68).

Federalism, in the institutional sense, is a system of distributed regional authority characterized by 'self-rule plus shared rule' (Elazar 1987: 12). Separate polities are united under a representative governing head 'in such a way as to allow each [unit] to maintain its fundamental political integrity' (Elazar 1995: 1). A unitary system, in contrast, is one in which authority may be devolved to sub-national units so long as the central government reserves the right to unilaterally amend such powers.

The question of whether foresight programs rest on foundations of parliamentary or presidential and/or federal or unitary structures is intimately related to the central and contested question of whether policy making processes differ in significant and systematic ways between institutional frameworks. On one hand, institutionalists may hold that such choices are transcendental in nature (Linz 1995, cited in Eaton 2000). They argue that, in choosing between a parliamentary or presidential system for instance, nations choose 'a whole system, whose various properties arise endogenously...out of the political dynamics that their adopted form sets in motion' (Moe and Caldwell 1994: 55-57). In particular, they hold that the fusion or separation of executive and legislative powers in parliamentary and presidential systems, respectively, generates consistent differences 'in terms of the incentives and constraints that face policymakers' (Linz 1995: 27). On the other hand, scholars such as Shugart and Carey (1992), Mainwaring (1993),

Tsebelis (1995), and Eaton (2000) attribute the diversity of policy outcomes within groupings of parliamentary and presidential governments to lower level institutional options including electoral and legislative calendars, the president's legislative powers, the number of viable parties, and bicameralism.

Cognizant of these ongoing debates, this paper takes as its point of departure a few general propositions: (1) parliamentary systems typically have fewer veto points (i.e. actors whose consent is necessary for a decision) *at the level of national government* due to the fusion of powers, (2) parliamentary governments, particularly emerging from the Westminster model, tend to have stronger and more autonomous professional bureaucracies owing in part to the absence of oversight from a separate legislative branch, (3) other aspects such as accountability, locations of policy negotiations, and interest groups strategies may differ within governmental types but are likely to be heavily affected by a government's choice of separation or fusion of powers, and (4) federal systems inherently have a greater number of veto points than unitary systems, yet policy planning and coordination responsibilities may be delegated to lower-level authorities in both federal systems and unitary systems that have undergone some devolution.

1.4 Case Selection

While originators and archetypical examples of their respective political systems, the UK and US differ sufficiently in size, federal/unitary structure, and cultural institutions as to raise serious questions as to their suitability as comparative case studies. Yet it is their likeness in a number of key areas including: income, degree of political competition, leaders' articulated interest in building strategic planning capabilities, difficulty accruing electoral gains from long-range programs, and degree of interagency bureaucratic competition that justify direct comparison. In order to account for the role of potentially important confounding variables four secondary cases were added. These cases also seek to illuminate the impacts of level of GDP and degree of political competition on the development of interagency strategic planning architecture. They include two parliamentary republics—Singapore (small, unitary, highly developed, and with low political competition) and India (large, federal, emerging market, and with high

political competition)—as well as two presidential republics—South Korea (medium sized, unitary, highly developed, and with high political competition) and Brazil (large, federal, emerging market, and with high political competition).

2. POLICY FORESIGHT INSTITUTIONS IN THE UNITED STATES

2.1 Introduction

Contemporary public-sector strategic planning has its clearest origins in the United States national security apparatus. After the end of World War II and the rise of the Cold War, several research institutions with both formal and informal links to the US government began applying innovations in modeling and decision sciences to scenarios regarding nuclear deterrence and space technologies development. The newly established National Security Council adopted clear policy foresight functions, seeking to inform executive decision making through exploration of future contingencies. The State Department Policy Planning Staff was initiated to focus exclusively on long-range considerations and held considerable influence with top-level decision-makers. Yet , in the intervening decades, these institutions either changed their focus to deal primarily with issues of the day or lost sustained influence with key officials (Friedberg 2009: 84). Few new processes or institutions emerged to deal with the aforementioned requirements of interagency coordination in planning and futures analysis; current long-range interagency processes can now accordingly be described as moribund (Friedberg 2009: 84). This section will present an overview of recent and existing institutions beginning with interagency executive branch groupings and proceeding to individual departments, the legislative branch, and state governments. Institutional and ideational underpinnings of the US system are discussed in greater depth in the section comparing US and UK approaches.

2.2 The Interagency Level

Comprehensive interagency planning in the US government is frequently described as a paradox (Feaver and Inboden 2009: 97). On one hand, the White House—with its multi-jurisdictional policy groupings including the national security, economic,

homeland security, and domestic policy councils—is the only logical locus of long-range interdisciplinary planning. Executive agencies including the State, Treasury, Defense, Education, Energy, and Transportation Departments as well as the armed and intelligence services all have their own strategic planning capacities but focus almost exclusively on their own areas of concern (Friedberg 2009: 86). It is only at the level of the presidency that competing visions and priorities can be managed in accordance with a broader strategy and perspective. Yet, on the other hand, long-range thinking is particularly difficult in the White House given the widespread perception that it is understaffed and all available personnel must focus on managing near-term crises (Feaver and Inboden 2009: 97). Friedberg and others therefore argue that the only activities resembling national strategic planning in the US government take place in informal clusters of top officials or ad hoc interagency groups when time permits or strategic direction is patently needed (Friedberg 2009: 88). While officials on the National Security Council staff have held titles and mandates related to strategic planning, Friedberg argues that they have operated without significant staff support and have often been charged with more pressing duties, such as managing current policy issues or drafting speeches and other public documents, which tend to take precedence over planning (Friedberg 2009: 88).

As mentioned above, previous incarnations of the interagency executive policymaking process, particularly in the aftermath of World War II, have been more foresight oriented. Jentleson offers the example of Eisenhower's NSC Planning Board as a paragon of interagency coordination (Jentleson 2009: 73). Comprising top planning officials from several agencies including State, Treasury, Defense, and the intelligence agencies, the board met up to three times a week to 'analyze trends, anticipate as well as identify problems, consider proposed solutions' advantages and disadvantages, and confront explicitly questions of means and ends." (Bowie and Immerman, quoted in Jentleson 2009: 73). The board was additionally tasked with assessing current policies in the light of emerging trends. An early archetype of what this paper terms a 'policy foresight' program, the Planning Board mandate was not simply to plan but also to coordinate bureaucracies and to seek 'statesman-like solutions' to national security problems rather than to simply find compromise between departmental positions (Jentleson 2009: 73). Its products were typically policy papers aimed at identifying key

issues and various alternative outcomes as well as critical areas of disagreement to be resolved by the President and cabinet (Friedberg 2009: 92).

During the Kennedy administration, the increasing necessity of supporting the president in managing crises and supervising the operations of various agencies shifted the NSC toward a more operational role and undermined the group's ability to orchestrate a national strategic planning process (Friedberg 2009: 88). Former national security advisor Zbigniew Brzezinski lamented that the elimination of the planning board 'has handicapped the U.S. government ever since.' (Jentleson 2009: 73). Indeed such sentiments contributed to the creation of the Nixon Administration's National Goals Research Staff. On the premise that the US Government could 'no longer afford to approach the longer-range future haphazardly,' Nixon commissioned the unit to employ private sector strategic planning methods to forecast trends in both foreign and domestic affairs (Nixon 1969). Yet, as it became clear that the process could potentially lead to critiques rather than support for the administration's domestic policy agenda, it fell prey to political infighting (Leigh 2003: 6). It was disbanded the following year. A decade and a half later, similar concerns contributed to the stipulation under the Goldwater-Nichols Defense Reorganization Act that the president submit to Congress an annual National Security Strategy (NSS) explaining longer-range interdepartmental interests related to defense and foreign policy, resources needed to secure such interests, and estimations of the adequacy of US capabilities (Locher 1996). While the NSC has taken the lead in composing the report, the above requirements have been only partially adopted. The NSS is produced every four years instead of annually; it is frequently used as an opportunity to explain policies rather than undertake serious planning and report findings.

Still, cross-departmental planning has been regularized, if not systematized, through the interagency process (Friedberg 2009: 93). Since the 1980s, several committees have emerged below the level of the NSC and also, since the Clinton Administration, the NEC. These include the principals committees, comprising relevant cabinet officials and chaired by one of the president's lead advisors (e.g. for economic, domestic policy, or national security affairs), the deputies committees, comprising second-ranking departmental officials and a similarly ranking presidential adviser, and

numerous policy coordination committees for regional or functional issues staffed by departmental advisors and White House senior issue experts (Friedberg 2009: 93). Officials present for interagency meetings may rely on analytical staff at their respective departments for information on longer-range trends and events and, contingent on group consensus, pass key opportunities and concerns on to leading policymakers.

Yet, by 2006, a perceived lack of systematized strategic planning compelled President George W Bush to institutionalize the aforementioned committees' foresight functions by creating a 'National Security Policy Planning Committee' to link the leaders of planning units at each federal agency related to foreign or national security affairs. The perennial difficulty faced by such a grouping is the precariousness of planning units in the agencies, an issue addressed later in this section (Drezner 2009:11). The White House sought to ameliorate this issue by also initiating an office within the NSC titled 'Strategic Planning and Institutional Reform' with exclusive focus on informing key policymakers of long-term trends and contingencies, performing retrospective studies from relevant historical events, and occasionally developing new policy initiatives (Feaver and Inboden 2009: 101). An explicit attempt at building formal foresight capabilities, the group coordinated with numerous outside experts including the political opposition and spearheaded studies to be undertaken by departments or intelligence agencies (Feaver and Inboden 2009: 104). Yet the group remained small and occasionally hamstrung by political considerations. A core element of its mandate was help define and promote the president's foreign and national security agenda (Feaver and Inboden 2009: 106).

While positioned within the intelligence community, the National Intelligence Council has become a key repository for interdisciplinary information on medium and long range trends broadly related to national security and foreign affairs. It therefore plays an important role in interagency planning. Founded in 1979 primarily to produce authoritative assessments on key foreign and defense policy questions, the NIC operates the Global Trends program, which is currently the only steady-state cross-jurisdictional scenario planning structure in the US Government. This strategy-centered unit conducts one-year exercises at regular intervals involving up to 400 government, academic, private, and nonprofit experts through workshops to identify focus questions and

contingencies and to prioritize issues; it uses these views to craft storylines, add quantifiable elements, and ultimately detail several extensive alternative scenarios. Their final report is disseminated throughout the government in order to stimulate debate and encourage long-range thinking. Futures methodologies also figure in the abovementioned written reports or National Intelligence Estimates. While the NIC's vast network of expertise may compensate for its relatively small size, its focus on foreign and security issues is decidedly narrow by the standards of an interdisciplinary policy foresight program.

2.3 Departmental Capabilities

Nearly all major federal bureaucracies have some strategic planning capabilities, yet few are on firm institutional footing. Several have disappeared, reappeared, or been merged into other offices in recent decades (Jentleson 2009: 72). The Treasury planning office was, for instance, merged with its office of public affairs and placed under the direction of the department's leading public relations officer. The notable exceptions to this trend of precariousness have been the State and Defense Departments, both of which are presented in the following section.

The State Department's Policy Planning Staff is the most venerable agency of its kind. While the office's level of influence has fluctuated with different presidential and departmental administrations, it has maintained its size and funding as well as its initial mandate set forth by Secretary of State George Marshall in 1947:

'(1) formulating and developing, for the consideration and approval of the Secretary, long-term programs for the achievement of US foreign policy objectives, (2) anticipating major problems the department may encounter, (3) undertaking studies on the broadest politico-military problems, (4) independently evaluating current foreign policies and recommending changes, and (5) coordinating all planning activities within the department.' (United States Department of State Policy Planning Staff 1983: 6)

The core function has been, in short, to assess issues and trends just beyond the range of traditional analysis and the time-horizons of top political appointees as well as to assess current policies in light of these possibilities. The first staff, led by George Kennan, was highly influential and notably examined the question of a US role in European reconstruction, devising the program of aid later known as the Marshall Plan (United States Department of State Policy Planning Staff 1983: 15). It also created the intellectual foundations of what became the Cold War 'Containment Doctrine' (United States Department of State Policy Planning Staff 1983: 60). Yet later incarnations fared less well. In the 1960s, PPS evolved from a policy organ to a unit more akin to an academic think tank (Smith *et al.* 1987: 28). Today, it divides its time between traditional activities and added present-oriented functions such as managing foreign service dissent and speechwriting for the Secretary of State. In 2009, however, the Obama administration announced an amplified role for PPS in foresight processes: the unit has been given a lead role in the development of a Quadrennial Diplomacy and Development Review (QDDR), an exercise to assess cross-cutting trends in aid and foreign policy and determine how best to allocate resources in support of longer-range US interests.

The QDDR concept is borrowed from the flagship planning process of another executive department: Defense. The Pentagon's Quadrennial Defense Review (QDR) similarly assesses current policy priorities in light of scenarios and accordingly makes judgments on funding allocation. The QDR is based on a year-long forecasting, debating, and writing process and is ultimately presented to the Secretary of Defense as a basis of decision-making as well as advice to the President. Below this macro-level strategy exercise, usually coordinated by the Undersecretary of Defense for Policy, are numerous operational planning processes involving military scenarios, contingency identification, and gaming among other techniques (Jentleson 2009: 72). Still, Defense faces many obstacles inherent in other planning programs: long-range priorities are often overshadowed by urgent short term consideration and political leaders frequently change thereby changing levels of interest in future contingencies. Most crucially, Defense planning processes are often fragmented internally with responsibilities divided organizationally between the Undersecretary for Policy, the undersecretary of defense for

personnel and readiness, and the military services Joint Staff plans and policy directorate, each of which is supported by multiple levels of planning staff.

2.4 State and Municipal Governments

Given their primary responsibilities in disaster preparedness, policing, education, local economic development, and a range of other policy areas, US state and municipal governments have long undertaken independent strategic planning operations. As Young (2002) argues, these programs have followed trends in public management (e.g. Management by Objectives [circa 1970], Zero-Based Budgeting [circa 1977]) with several converging recently around a ‘benchmarking’ approach aimed at defining long-range goals with reference to prospective contingencies. The State of Oregon has been an early and enthusiastic exponent of this method, establishing the first formal benchmarking program to which hundreds of citizens and policymakers contribute views as well as a Progress Board to oversee state agencies’ effectiveness in contributing to cross-jurisdictional strategic plans. Several other states including Utah, Michigan, Florida, Texas, Connecticut, Pennsylvania, and Kentucky have been recognized for similar innovations (Council of State Governments 1997).

3. POLICY FORESIGHT INSTITUTIONS IN THE UNITED KINGDOM

3.1 Introduction

While development and maintenance of the world’s largest empire required extensive strategic direction, contemporary British foresight programs have emerged from humbler objectives: maintaining economic and technical competitiveness and guarding against public safety threats. Current programs emerge from two lineages: an executive branch strategy unit dating back to the early 1970s and a scientific assessment program dating back to the 1960s. Accelerated by the rapid onset of BSE, rural anti development protests, and genetically modified foods as well as interest in the 1990s in applying private sector techniques, the scope and intensity of national strategic planning programs has grown markedly in recent decades.

3.2 Executive Strategy Programs

The core interagency planning units have notably evolved to suit the preferences of Prime Ministers. The first, formally titled the Central Policy Review Staff, was founded in 1971 by Prime Minister Edward Heath and was commonly known within the UK government as the ‘think tank.’ It was led by the influential, occasionally iconoclastic biologist Lord Victor Rothschild. In many ways, the unit was the archetypical policy foresight unit: its mandate was to ‘rise above the issues faced by individual ministerial departments’ and provide broad strategic direction (website); its head had unrivaled access to the prime minister and other top officials; it prided itself on making strong challenges to current policy and was, accordingly, frequently at odds with other elements of the civil service (Bloomfield 1978: 380). Its focus was primarily on the deeply complex interagency issues such as the future of the British-built Concorde supersonic airliner, which tended, in Rothschild’s words, ‘to leave the cabinet confused’ (Bloomfield 1978: 380). With the departure of his patron, Edward Heath, from 10 Downing Street, Rothschild found a dearth of interest in planning in the UK government and quickly resigned. The ‘think tank’ continued to play the role of in-house iconoclast, however. Under Sir Kenneth Berrill in the late 1970s, the unit submitted a nearly 500 page report recommending the virtual abolishment of the traditional diplomatic service and replacement with a corps of trade, energy, and resource specialists (Bloomfield 1978: 381).

The Central Policy Review Staff was subsumed by the newly-established Efficiency Unit during Margaret Thatcher’s government and played a greater role in cross-government consultancy particularly related to departmental budgetary planning and financial performance. Reflective of both personal preference and a New Labour commitment to adopt inventive private sector practices, the first Blair Government expanded the group’s mandate to play a lead role in policy research pertaining to cross-jurisdictional or multi-year issues. In the late 1990s, it was divided into a Performance and Innovation Unit, charged with undertaking many duties of the Thatcher-era outfit, and a Forward Strategy Unit, tasked with undertaking specifically long-range assessment projects at the behest of the Office of the Prime Minister.

The two units merged into their current incarnation, the Strategy Unit, in 2002. In addition to the aforementioned advisory and consultancy responsibilities, the unit now works under an explicit mandate to build ‘strategic capability’ across UK government departments. It seeks to do so by distilling good practice in scenario planning, horizon scanning, and other methods into published strategy guides as well as by supporting departmental participation in cross-jurisdictional policy reviews. Recent projects include whole-of-government ‘strategic audits’ assessing UK performance on a range of international and domestic benchmarks and specific assessments of issues ranging from Afghanistan strategy to ‘youth anti-social behavior,’ each involving multiple departments. Crucially, the Strategy Unit offers policy prescriptions based on its assessments both to the Prime Minister and departmental leaders. UK civil service officials indicated in interviews that the consultancy function of the Strategy Unit is most frequently used to orchestrate departmental programs around 10 Downing Street’s long-range priorities.

3.3 The Science Lineage of Horizon Scanning

In contrast to the aforementioned policy-oriented executive strategic planning architecture, the programs now collectively known as UK Foresight additionally take on major heuristic functions. These outfits have their origins in 1960s ad hoc initiatives to improve military readiness and educational investment through early detection of scientific and technological (S&T) trends (Habegger 2009: 14). In the mid-1990s, such efforts were institutionalized as the UK Foresight Programme within the nascent Office of Science and Technology (OST). The 1990s era unit routinely drew on the views of diverse stakeholders in business and academia to set national research and development priorities. In 1999, it launched ‘thematic panels’, involving a greater diversity of stakeholders and broadening the conceptual boundaries of the unit’s purview, in order to examine the multidisciplinary implications of S&T policy and change. The restriction to strictly S&T issues was lifted in 2002, and the group subsequently began analyzing questions of innovation related to education, the environment, and other fields. This conceptual expansion laid the groundwork for the government’s July 2004 ‘Science and Innovation Investment Framework’ to direct OST to establish a ‘centre of excellence in

horizon scanning.’ Entering operation in December 2004, the Horizon Scanning Centre (HSC) was given a mandate to ‘feed directly into cross-government priority setting and strategy formation’ (Harbegger 2009: 14). It seeks to do so in two primary ways: departmental consultancy and contingency scans. First, the HSC aids various government ministries in developing their own planning capabilities, particularly through training in forecasting techniques and technologies. It furthers these efforts by organizing a ‘Future Analysts Network’ symposium series to connect foresight-oriented units throughout the government and encourage cooperation. Second, the HSC runs its own strategy operation known as the Sigma Scan. The project brings together civil servants, academics, and other nongovernmental experts to draft short papers on prospective multidisciplinary challenges and opportunities over a range of 50 years. Each paper addresses its issue’s range of implications, causal drivers, inhibitors, historical parallels, likelihood, and importance to various parties. As a largely heuristic exercise, the papers are categorized according to the type of critical thinking that should be applied to the issue presented. These include: wildcards (e.g. low probability, high impact events), forecasts (based on clear indicators), scenarios, key trends or drivers of change, or weak signal in current intelligence.

Many of the HSC’s activities feed back into the Foresight Programme’s cross-governmental analysis projects, which cover specific issues of broad interest and interdisciplinary scope. Recent examples include assessments of obesity in the UK, the future of mass transit, and the future of land use. These ‘foresight projects’ must: (1) have a range beyond ten years in a field where change is rapid and uncertain, (2) not duplicate current government efforts, (3) aim toward the development of specific policy options, and (4) be backed by a commitment from departmental or agency leaders to give consideration to findings (Rhydderch, Personal Communication, 8th April 2010). On the final point, each project typically requires a sponsoring minister not only to ensure relevance but also to guarantee access to personnel with relevant topical knowledge.

3.4 Departmental and Regional Capabilities

Both the Blair government’s zeal for strategic planning and the emergence of the Strategy Unit and HSC as repositories of planning best practices contributed to a

proliferation of foresight-oriented groupings at the departmental level (Schultz, Personal Communication, 29th March 2010). Several major UK departments and agencies have independent planning or horizon scanning branches including the Foreign and Commonwealth Office (FCO), Ministry of Defense (MOD), Department of Environment, Food, and Rural Affairs (DEFRA), Department of Energy and Climate (DEC), Department for International Development (DFID), Health and Safety Executive, and Food Standards Agency. DEFRA, for example, initiated its horizon scanning and futures operations in 2002 and now hosts a small permanent team, which undertakes several projects including a periodic ‘baseline scan’ to identify a range of important trends, future issues, and wildcards using methods ranging from crop forecasts to focus groups and workshops on food security and future land use practices (DEFRA 2010).

The FCO planning unit has much earlier origins. Much like the US State Department’s Policy Planning Staff, the FCO Planning Committee was established during the early years of the Cold War to foresee foreign policy choices the UK might face over a period of five years or more as well as to develop coherent decision-making doctrines. Its staff has consistently remained relatively small, but it has had an outsized impact on policy for decades, perhaps owing to a 1970s-era rule that new funds cannot be approved without comments from policy planners (Bloomfield 1978: 380). It has nonetheless struggled with the ever-present pressure to abandon long-range assessments and contribute to the management of current issues (Bloomfield 1978: 380). In its current incarnation as the FCO Strategy Unit, the group undertakes scenario planning and forward-looking research projects at the behest of the FCO Policy and Strategy Board, which comprises senior officials. The FCO Strategy Unit is also tasked with managing relations between the UK government foreign policy establishment and major think tanks and academic policy institutions.

Scotland has developed a multipurpose ‘futures forum’ to support research into future trends and contingencies. It functions as a think tank with permanent staff and periodic expert symposia as well as research service for members of the Scottish Parliament. While the process of devolution accelerated in the 1990s has resulted in significant shifts including some taxation power for the Scottish Parliament, the

continued primacy of Westminster over Scottish affairs limits the role of the forum in several ways, which are explained in depth in the next section.

4. COMPARING THE CASE STUDIES

4.1 Introduction

As the previous sections demonstrate, both US and UK leaders have articulated intentions to develop cross-government foresight capabilities and invested resources in their development. Yet the UK has made considerably greater progress toward the establishment of an integrated interdisciplinary process. This section investigates the institutional and ideational factors that undergird the two systems while establishing candidate variables for explaining the presence or absence of integrated national strategic planning architecture in governments with stated interest in its development. These comprise institutionalist variables including: (1) separation or fusion of powers, (2) the role of the civil service, and (3) levels of regional autonomy as well as noninstitutionalist variables including: (1) country size, (2) partisan competition, and (3) organizational culture. Later sections will refine this set of variables through analysis of the secondary case studies.

4.2 Institutional Variables

4.2.1 Separation of Powers

Arguably the most consequential divide between presidential and parliamentary systems is the separation or fusion of powers, respectively. This divide has major implications for the development and operation of policy foresight programs including: (1) veto players in the development of institutional architecture, (2) staggered or uniform electoral terms for political officials, (3) public disclosure of information regarding the policy-making processes, and (4) delegation to bureaucracies.

First, the number of veto players in a presidential system such as the US makes it difficult for a president with strong interest in strategic planning to institutionalize foresight programs throughout the executive branch without first gaining congressional budgetary approval for each program or unit. This can be a difficult undertaking even

when Congress is controlled by the president's party. As Schultz (personal communication, 29th March 2010) argues, the Blair government was able to institutionalize strategic planning throughout UK government departments simply by convincing ministers, who are also sitting members of parliament, to prioritize it.

Although the number of veto points is generally greater in the coalition governments that periodically emerge in the UK, the tendency for more frequent institutional innovation in parliamentary systems is evidenced by the routine reshaping and renaming of executive departments under new British governments. This comparatively fluid process of institutional innovation in the UK reflects the notion put forward by Horowitz that, in parliamentary systems, the faction winning executive power gains more complete control over elements of government including institutional frameworks and strategic direction than in presidential systems (Horowitz 1990: 28).

Second, while terms of office in most elected governments are short enough to make attention to multiyear plans or contingencies difficult, in presidential systems including the US they are also generally staggered (Jentleson 2009: 75). Executive planning is based on four year presidential terms while Senate terms are six years and House of Representatives terms are two years. With support from the White House and both houses of Congress necessary for most significant policy decisions, political calendars must often conform to the lowest common denominator of two year terms. This may effectively remove electoral incentives for paying attention to longer-range issues. In the UK, parliamentary terms may occasionally be truncated by no confidence votes, yet all elected officials are chosen at the same time, generally resulting in uniform four to five year terms and reducing the planning incoherence that may result from differing political calendars.

Third, as Cowhey (1995) argues, the process of negotiating plans and decisions between separate branches 'leads to a more systematic disclosure of information about policymaking' than within a fused system (quoted in Eaton 2000: 364). A greater number of veto points typically results in a greater number of oversight hearings, reporting requirements, and personnel privy to details; these factors, in turn, increase the likelihood of scenarios, contingencies, and critiques being leaked to media. This poses a potential problem for strategic planning, which typically results in challenges to

prevailing norms and requires openness to heterodox thinking. Political leaders may wish to avoid the risk that improbable or disconcerting scenarios, strong criticisms of present doctrines, or electorally unpalatable policy options being made public.

Fourth, while professional civil servants typically have the longest time horizons and often the most aptitude to manage policy foresight programs (a topic discussed in greater depth later in this section), Eaton argues that legislators in a system characterized by separation of powers are often reluctant to vest them with authority ‘for fear that the president as a separately elected politician will use the bureaucracy in ways that do not advance legislators' interests’ (Eaton 2000: 370). Vogel’s 1986 study, which contrasts the use of complex legislated environmental regulations in the US with considerable bureaucratic flexibility in the UK, confirms this notion. Legislators in parliamentary republics, holding final authority over cabinet ministers (who remain legislators themselves) and civil servants, may be more likely to delegate important planning research functions (Eaton 2000: 370).

4.2.2 The Role of Civil Service

Beyond the question of legislators’ willingness to delegate powers, the UK bureaucracy is also structurally distinct from its US counterpart. Its members are formally employed by the Crown rather than the elected parliament, and, while this relationship is largely ceremonial and senior civil servants can still be called to account before parliament, they are protected in significant ways from serving the political interests of the party in power. They are moreover guaranteed to hold some key policy coordination positions, which remain in place over the course of electoral transitions. A strong civil service is accordingly a primary factor enabling the development and operation of foresight programs because it promotes: (1) continuity of government and (2) a technocratic rather than political approach.

First, given the short terms and electoral cycles described earlier, political officials generally have shorter time horizons than civil servants. While cabinet ministers may arrive and depart frequently with electoral change or turbulent intraparty or coalition politics, civil service officials up to a department’s first permanent secretary are explicitly tasked with taking a long view of events and remaining over the course of government

transitions. They are thus frequently described as the ‘red thread’ that provides continuity to the British government (O’Brien, personal communication, 6th April 2010). In contrast, leaders in executive departments in the US are frequently replaced down to the assistant secretaries level (the fourth level from the top of the organizational hierarchy). This is perhaps coincidentally the highest level at which, according to former Secretary of State Henry Kissinger, ‘people can still think without getting overtaken by the day to day operation of the machine’ (Zegart 2009: 115). While a short-term government may identify or take action on a long-range contingency, permanent high-ranking personnel are likely crucial to enacting the sustained commitment that makes lessons and data gathered from policy foresight practicable.

Second, foresight programs are intended to be technical and depoliticized processes insofar as they seek to encompass a large diverse range of perspectives. The prospect of such a program may be ambiguous or even unappealing to a political official fixated on electoral gains. Influential civil servants accordingly played a major role in hastening their development in the UK. In particular, former government chief science advisor Sir David King championed the development of both the HSC and departmental planning units (Schultz, 29th March, 2010)

The aforementioned neutral character may be jeopardized when foresight projects are undertaken by political appointees with vested interest in the promotion of a particular viewpoint. Elected officials in the UK have shown willingness to trust nonpartisan civil servants to operate the foresight program and HSC with expectations of objectivity, although the Strategy Unit is designed to reflect the priorities of the Prime Minister’s office. US officials have placed nearly all key planning functions under the direction of political personnel. A case in point is the Bush administration’s SPIR unit tasked with long-range planning at the National Security Council. The group was instructed to exhibit a ‘restrained partisanship,’ considering the president’s agenda in development of strategic assessments (Feaver and Inboden 107). Tellingly, the group reported to the president’s deputy chief of staff for strategic initiatives Karl Rove, also the president’s long-time political advisor (Feaver and Inboden 100). The head of the State Department’s PPS is similarly selected by the Secretary of State with consideration of ideological leanings rather than solely meritocratic considerations.

4.2.3 Regional Authority

In 1932, US Supreme Court Justice Louis Brandeis noted ‘that a single courageous state may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country ‘(Brandeis 1932, cited in Greve 2001). This oft-cited quotation aptly summarizes the longstanding trend of states and municipalities driving the development of US public policy. California, for instance, set the first automobile emissions standards and Wisconsin enacted the model of welfare reform eventually adopted nationally during the Clinton Administration. The stipulation that any powers not enumerated in the Constitution are reserved to the states enables this type of innovation; it also arguably absolves the federal government of the sole responsibility to account for long-range contingencies associated with certain elements of domestic policy. This helps to explain both the robustness of state planning and benchmarking programs as well as the paucity of interagency planning outside the domains of foreign and national security affairs.

While devolution, the partial grant of self-governing powers to Scotland, Wales, and Northern Ireland, creates a greater array of regional stakeholders in domestic governance, it ultimately does not diminish the bedrock legal principle of the supremacy of Parliament (Bogdanor 2001: 1). Final authority and associated responsibility remains hierarchical leading to the national government. UK planning institutions including the Strategy Unit, Foresight Programme, and HSC therefore focus on a broad range of governance questions including domestic concerns such as policing, public health, and environmental quality.

4.3 Noninstitutionalist Variables

4.3.1 Size and Population

The effect of a country’s size and population on the development of foresight institutions is, at first glance, indeterminate. While a small country government may perceive itself as too dependent upon exogenous trends to set meaningful strategic plans, such dependence on external conditions may likewise necessitate policy foresight. The latter view is arguably more persuasive in analysis of the UK. The government’s perceived vulnerability as a mid-sized post-imperial power at the edge of the Cold War

fault line may have contributed to the development of foresight institutions in the mid to late 20th century. In the case of S&T, officials in the 1960s were keenly aware of a deficit in research capabilities compared to the superpowers and sought to apply systematic foresight as an ameliorative effort (Habegger 2009: 14). While the geographical insulation and vast ‘strategic depth’ of the US may have otherwise contributed to a sense of invulnerability, the gravity of nuclear confrontation as well as strong geopolitical and S&T interests contributed to strong interest in strategic planning.

The most relevant impacts of size on institutional development are bureaucratic culture and cost. As Nusbacher (personal communication, 14th April, 2010) argues, UK departments are, on account of their size, characterized by comparative informality and openness to experimentation, whereas US departments are sufficiently large to suffer greater inertia. The number and scale of government programs may moreover make comprehensive planning and foresight consultancy programs along the lines of the HSC prohibitively expensive.

4.3.2 Partisan competition

One of the arguable strengths of many liberal republics is also a significant barrier to strategic planning. While promoting accountability and vigorous debate, the prospect of frequent electoral turnover often induces leaders in democratic governments to focus on near-term considerations in order to present tangible achievements to an electorate. Varying priorities among parties moreover reduce likelihood of action to achieve long range goals. Indeed, the prospect of electoral turnover occasionally makes planning appear futile. Even if horizon scanning uncovers important opportunities for a government, exploiting them may require sustained commitment over numerous electoral cycles.

This is a particular impediment to planning in the US, where there currently exists no framework for the management of multi-term legislative undertakings in Congress (Project on Forward Engagement 2006). In the executive branch, the risks of leaks and politicization mentioned as aspects of separation of powers and the role of civil servants, respectively, are worsened by strong partisan competition. The danger of the first risk is evidenced by the Bush administration’s suppression of a Pentagon report on the long-

range national security impacts of climate change for fear of benefiting Democratic criticism (Friedberg 2009: 91). Political officials' fear of leaks may result in analysts' aversion to risk and therefore diminish the robustness of planning. The second danger is evidenced by the collapse of President Nixon's National Goals Research Staff, perhaps the most comprehensive interagency policy foresight system proposed by a US administration. It was quickly disbanded due to political infighting and, ostensibly, its failure to benefit the administration's domestic political interests.

Yet the UK is marked by a similarly high degree of partisan competition including a polarized media that might amplify the risks of leaks. Indeed, the FCO and other departments have complained about the impropriety of certain contingency papers presented in the HSC sigma scan (Rhydderch, Personal Communication, 8th April 2010). Several interviews with UK civil servants suggest that partisan sensitivities result in the Strategy Unit, with its proximity to political leaders in No. 10 Downing Street, holding far greater relevance across departments than the various other foresight institutions.

4.4 Omitted Variables

Another potentially important, though highly subjective, factor reflected in the case studies is cultural orientation to planning. Smith, Allen, Stewart, and Whitehouse outline factors that contribute to a US cultural aversion to long-range planning including spurious conflation of strategic planning with socialist planned economies, an historical belief in determinism, and concern that strategic plans 'lock-in' government policy (Smith *et al.* 1987: 9). In contrast, Nusbacher (personal communication, 14th April 2010) cites that the civil service culture in the UK is generally characterized by a dictum of 'speaking truth to power' and a willingness to engage in 'impressionistic' exercises in strategy formation. Cultural orientation is omitted as a variable, however, because it is highly malleable and not amenable to categorization. Moreover, the presence of leader-level interest to long-range planning (a condition required for inclusion in this study) in itself indicates a considerable degree of cultural acceptance.

A second omitted variable, GDP, is not readily apparent through comparison of the US and UK, two similarly high-income countries. Yet technical development and personnel costs are substantial and might conceivably inhibit a low-income state from

developing an integrated foresight program. Nonetheless, as O'Brien (Personal Communication, 6th April, 2010) argues, cost is largely a function of country size: the larger the government, the greater the complexity in integrating analysis functions. High-level leaders' commitment to program development also, ipso facto, indicates some capacity to muster resources.

4.5 Candidate Variables

The above analysis suggests that several factors facilitate the development of integrated foresight architecture in countries in which there exists strong stated government interest in its development. These include: (1) fused executive and legislative powers, (2) strong civil service position and influence relative to political officials, (3) unitary system, (4) small size and population, and (5) limited partisan competition. In addition to leaders' stated interest in foresight development, both the US and UK share a high degree of partisan competition. Has the UK system overcome this impediment or is partisan competition a spurious explanation? The clearest answer is that the effects of partisan competition in the UK have been mitigated by the presence of an influential civil service, which addresses some of the core problems related to partisanship including the need for continuity of key priorities across terms of office and the need for a technocratic approach to policy research. The next section will revisit this question in assessing the applicability of the above factors to the secondary case studies.

Table 1.0: US and UK Comparison¹

Country	Leaders' stated interest in development of interagency foresight capabilities?	Executive and Legislative Powers	Strength of Civil Service relative to political officials	Pattern of regional authority	Country Size and population	Partisan Competition	Foresight Architecture
UK	Yes +	Fused +	Strong +	Unitary +	Medium =	High -	Pervasive and highly integrated
US	Yes +	Separate -	Weak -	Federal -	Large -	High -	Limited and not systemically integrated

¹ For synoptic clarity, symbols "+, =, and -" have been added to connote positive, ambiguous, or negative impacts on architecture development

5. SECONDARY CASES

5.1 Introduction

This section presents brief case studies of Brazil, India, South Korea, and Singapore, four countries in which leaders have clearly articulated interest or invested resources in the development of integrated strategic planning capabilities. After assessing these countries' progress, the paper will conclude by reassessing the candidate variables presented in the previous section with reference to the institutional and ideational underpinnings of these additional cases.

5.2 Brazil

The Brazilian Government has been involved in various forms of formal futures research since 1964, when it established the Institute of Applied Economic Research (IPEA) to compile statistics and develop analysis regarding economic and social trends related to public policy (Glenn 2009). It subsequently launched the Strategic Action Unit to coordinate analysis on a broader range of long-term issues. The unit has advised the president and agency leaders and directed several aspects of S&T innovation policy. In October 2007, the current administration announced the merger of IPEA and the Strategic Action Unit to form a new integrated Strategic Issues Secretariat. With a combined staff of 800 civil servants, including many seconded from other ministries across government, the new entity coordinates planning and policy implementation on a variety of interdisciplinary long-range issues including achievement of the UN's Millennium Development Goals in Brazil, education reform, electoral and legal enfranchisement, and sustainable development in the Amazon (Glenn 2009). The secretariat is ostensibly a new model for interdisciplinary foresight incorporating policy functions (issue assessments for key leaders and long-range operational coordination) as well as heuristic functions (interdisciplinary analysis and collaboration).

5.3 India

While there have been numerous calls for the enhancement of integrated foresight capabilities in India, particularly in the area of national security and intelligence (Padukone 2008), current institutional arrangements are primarily within the S&T and

economic development spheres. The government established the Technology Information, Forecasting and Assessment Council (TIFAC) in 1988 as an autonomous body within the Department of Science and Technology to conduct forecasts and assessments regarding S&T research as well as to present relevant policy options to India's political leaders. Like earlier incarnations of the UK Foresight Programme, TIFAC looks at multidisciplinary implications of S&T trends while maintaining a primarily technical focus. India's other major foresight institution, the Planning Commission has coordinated national economic development projects since independence, typically through the creation of five-year plans. The Planning Commission and TIFAC notably collaborated to direct the India Vision 2020 exercise, which resulted in numerous reports on India's long-range S&T future as well as economic forecasts. While the Planning Commission is interdisciplinary in focus, it neither aggregates planning research nor conducts scans for contingencies. Some of these functions are delegated to the National Security Council, which brings together heads of major military and intelligence departments, though that organization also lacks systematic planning methods (Babu 2003). India still therefore lacks a major coordinating institution for integrated policy foresight.

5.4 South Korea

Policy foresight programs have proliferated in the Korean Government over the past decade. They are also increasingly integrated. Currently, the Presidential Consultative Body on Policy Making directs interagency strategic studies and assessing aggregated research on longer-range issues. There is legislation, however, to further systematize such roles through the establishment of a Future Strategy Unit and position of chief of futures strategy within the Office of the President (Glenn 2009). This would potentially combine some policy coordination functions along the lines of the UK Strategy Unit with many of the technical and methodological development functions of the Foresight Program and HSC. Outside the presidency, additional interdisciplinary planning and coordination functions are undertaken by the Strategic Planning Division of the Fiscal Strategy Office, located within the Ministry of Planning and Budget. Additional institutions include: an S&T foresight group within the Korea Institute of

Science and Technology Evaluation and Planning, a task force for future strategy in the Government Youth Commission, and futures research groups in both the Korea Information Society Development Institute and Futures Society Research Forum.

5.5 Singapore

Singapore is widely regarded as having one of the most advanced coordinated systems for interagency strategic planning (Habegger 2009: 17). In the 1980s, civil servants began experimenting with scenario planning using models developed by Royal Dutch Shell and other private sector firms. Leading ministers formally sanctioned scenario planning as a tool in the 1990s and launched the Strategic Policy Office to conduct comprehensive scans as well as long-range issue analyses on behalf of government clients (Habegger 2009: 17). After several thwarted terror plots and the SARS outbreak, the government commissioned a security sector review in 2004, which eventually highlighted the need to develop new methods to detect ‘weak signals’ in intelligence and propagate an instinct to share (Habegger 2009: 19). The government subsequently developed an array of programs known collectively as Risk Assessment and Horizon Scanning (RAHS), which seek to link analysts across government agencies, employ new and evolving models and technologies to enhance analytical skills such as pattern detection in news and intelligence, and construct scenarios and other tools for policymakers. It comprises three offices: one for technology development, one for analytical coordination, and another for policy coordination, all of which link to Singapore’s main security and intelligence secretariat.