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Rice, Oil and the Atom: A Study of the Role of Key Material Resources in the Security and Development of Japan

IT IS A WELL-KNOWN FACT THAT JAPAN, AN EARTHQUAKE-PRONE archipelago of mountainous, forest-covered islands with relatively little land available for habitation, cultivation pasture or industrial production lacks a number of the key resources fundamental to the pursuit of industrialization and economic growth. As a consequence, Japan cannot even feed itself let alone provide a decent standard of living for its inhabitants without recourse to trade with the outside world. This demands the maintenance of a large number of complex diplomatic relationships with other sovereign states – neighbours, allies and rivals – as well as with non-state actors such as international firms, business associations and civil society groups. It also demands Japanese participation in multilateral organizations operating at both global and regional levels. All of these relationships are, however, affected by and subservient to Japan's close alliance with the United States. It is this alliance that forms the cornerstone of Japanese foreign policy.

This article explores the impact of Japan's lack of natural resources on its political economy and foreign policy, with particular reference to how security has been maintained within the comforting yet constraining embrace of the US–Japanese alliance. While the relationship between national security and economic growth plays a central role in the formulation of policy in all states, it is a particularly sensitive issue for Japan. The country is severely underresourced in both absolute and relative terms especially when measured against other leading industrial states, particularly the United States. Moreover, by virtue of Article 9 of the Japanese Constitution (the infamous 'Peace Clause') Japan has effectively lost one major arrow from its foreign policy quiver – the right to intervene militarily in order to secure vital supplies of natural resources.

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This extreme resource dependence coupled with military constraints has placed the Japanese government in the awkward diplomatic position of having to secure much-needed resources from states whose interests do not necessarily or always coincide with those of the USA, the one country treaty-bound to defend Japan in case of a military emergency.[1]

Nowhere is this more obvious, or crucial, than in Japan's tortured relationship with the Middle East where Japan is caught between the hammer of US support for Israel and the anvil of the Arab oil weapon.[2] One perceived avenue of flight from this dilemma has been the development of nuclear power, but this too has drawn Japan into the diplomatic quagmire formed by attempts to keep the Korean peninsula nuclear-free. Always problematic because of its former imperialism and because of the ambiguities associated with its own efforts to complete the nuclear cycle, Japan's efforts at nuclear diplomacy are further complicated by the distance (never that great or obvious but there nevertheless) between its position on North Korea and that of its major ally.

This distance has emerged in perhaps equal measure because of the tension between Washington's global focus and Tokyo's more regionally based concern on the one hand, and by the limited – yet ever-growing – range of Pyongyang's rockets on the other. The gap between the USA and Japan was, moreover, sharpened by the identification of North Korea as part of the 'Axis of Evil' during the State of the Union address in January 2002.[3] What is more, carelessness and criminality combined with a poorly enforced regulatory framework threaten to sink Japan's own nuclear industry, which would

[1] By virtue of Article 5 of the 1960 Treaty of Mutual Cooperation and Security between the United States and Japan. It should be noted, however, that there is some doubt regarding the credibility of the US commitment to defend Japan – to sacrifice, say, Washington for Tokyo in the event of a large-scale nuclear war waged on either a regional or global basis.

[2] Hanns Maull, *Oil and Influence: The Oil Weapon Examined*, Adelphi Paper No. 117, London, International Institute for Strategic Studies, 1975; Akifumi Ikeda, 'Japan's Relations with Israel', in Kaoru Sugihara and J. A. Allen (eds), *Japan in the Contemporary Middle East*, London, Routledge, 1993, pp. 155–69.

[3] Sheila A. Smith, 'Japan's Future Strategic Options and the US–Japan Alliance', in Jeffrey W. Thompson and Benjamin L. Self (eds), *Japan's Nuclear Option: Security, Politics and Policy in the 21st Century*, Washington, DC, The Henry L. Stimson Center, 2003, pp. 3–23.

place renewed and even more intense emphasis on the country's continuing ability to import vast quantities of oil.

Successfully maintaining the US–Japanese alliance also depends on the Japanese government's ability to manage the issue linkage inherent in a relationship as intimate as this. From the 1970s onwards, following a relative decline (both real and perceptual) from the heady days of unrivalled hegemony post-1945, the Guam Doctrine ensured that 'burden-sharing' became a key issue in US foreign policy no less for Japan than for the Western European states. Under the rubric of a 'comprehensive security' policy (discussed below) not only was Japan required to step up its military contribution to the alliance but so too was it forced to contemplate how it might assist the USA more actively in the economic sphere. This involved unilateral efforts to open and liberalize Japan's financial markets and to support developing states through an active aid policy, bilateral cooperation in financial, monetary and investment issues and coordination at the global level in multilateral institutions such as the UN, World Bank and IMF.[4]

One of the most pressing demands associated with burden-sharing, however, centred on the trade relationship and Japan's failure to support an open and liberal trading order in line with US global policy. By the 1970s US industry was squealing ever more loudly about Japan's allegedly 'unfair' trading practices, prompting a series of negotiations on import regulation, voluntary export restraints, market opening and exchange rate policy that dragged on into the 1980s and 1990s. In most areas, including agriculture, some progress was made although both sides continued to snipe at one another. On one issue, however, the Japanese simply would not budge. Fearing the electoral backlash that would almost certainly sweep them from power should they begin efforts at reform, the ruling Liberal Democratic Party (LDP) vetoed any attempt to raise the issue of the liberalization of Japan's closed rice market. So important was the electoral issue that the LDP was prepared to place the stability of Japan's relationship with the USA in jeopardy whilst simultaneously antagonizing powerful domestic constituencies – including some farmers, parts of the bureaucracy (principally the Ministry of

[4] Yamazawa Ippei, 'Gearing Economic Policy to International Harmony', in Glenn D. Hook and Michael Weiner (eds), *The Internationalization of Japan*, London, Routledge, 1992, pp. 119–30.

Finance, the Ministry of Foreign Affairs and the Ministry of International Trade and Industry), big business (dynamic export industries and their peak organization, Keidanren), the media and, of course, Japanese consumers.[5]

JAPAN AS A REACTIVE STATE

The main body of this article explores the role that rice, oil and the atom have played in the security and development of Japan and, cumulatively, in the ups and downs of the US–Japanese alliance. Before moving to that discussion, however, we must first place Japanese efforts to achieve resource security within an appropriate analytical framework. In this regard the concept of a 'reactive state' is particularly appropriate.[6] Writing in 1988, at a time when growing US–Japanese trade conflict appeared to threaten the very foundations of the wider relationship, Calder suggested that Japanese foreign economic policy formation might usefully be explained as an outcome of constraints and opportunities lying within three overlapping areas: state strategy, the character of the international system, and the internal structure of the state.[7]

If we broaden this to include foreign policy as a whole, as many do,[8] then in regard to the internal structure of the state we have already noted the importance of the dominant political party (the LDP), the bureaucracy, big business, interest groups, the media and Japanese consumers. These interact in different ways and in different patterns, depending on the issue at hand. No matter what the issue, however, the traditional image of the 'iron triangle' between government, bureaucracy and big business tends to dominate understandings of

[5] David P. Rapkin and Aurelia George, 'Rice Liberalization and Japan's Role in the Uruguay Round: A Two-Level Game Approach', in William P. Avery (ed.), *World Agriculture and the GATT*, Boulder, CO, Lynne Rienner, pp. 67–71.

[6] In this article I focus in particular on the work of Kent Calder. However, for a survey of the broader analytical contours of the 'passivity and reactivity' debate in regard to Japan see Dennis T. Yasutomo, *The New Multilateralism in Japan's Foreign Policy*, New York, St Martin's Press, 1995, ch. 2.

[7] Kent E. Calder, 'Japanese Foreign Economic Policy Formation: Explaining the Reactive State', *World Politics*, 40: 4 (1988), pp. 517–41.

[8] Yasutomo, *The New Multilateralism*, p. 41.

policy formation in Japan.[9] In regard to the character of the international system we have already introduced the importance of the Cold War and bipolarity, and Japan's subordinate position within the US-led anti-communist alliance. Finally, in the area of state strategy, post-war Japanese foreign policy was until the early 1970s dominated by the Yoshida Doctrine, which emphasized the pursuit of economic growth and 'low posture' diplomacy under US protection.[10]

Locked within this framework of constraints and opportunities Japanese foreign economic policy formation is best characterized, according to Calder, as 'reactive'. By this he means firstly a failure 'to undertake major independent foreign economic policy initiatives when [Japan] has the power and national incentives to do so', and secondly a responsiveness 'to outside pressure for change, albeit erratically, unsystematically, and often incompletely'.[11] It is striking that in all three of the case studies conducted below evidence of reactivity as specified above is very much in evidence.

Before applying this conceptual framework to Japan's resource diplomacy it is worth noting that, partly in response to the events outlined below, in the late 1970s and early 1980s the Japanese government began efforts to overcome its reputation for passivity and reactivity through the formulation of the concept of 'comprehensive security'.[12] This concept replaced a short-lived flirtation with what

[9] Classic studies include Herman Khan, *The Emerging Japanese Superstate*, Englewood Cliffs, NJ, Prentice Hall, 1970; and Chalmers Johnson, *MITI and the Japanese Miracle: The Growth of Industrial Policy, 1925–1975*, Stanford, CA, Stanford University Press, 1982. More recent correctives include Daniel I. Okimoto, *Between MITI and the Market: Japanese Industrial Policy for High Technology*, Stanford, CA, Stanford University Press, 1989; Kent E. Calder, *Strategic Capitalism: Private Business and Public Purpose in Japanese Industrial Finance*, Princeton, NJ, Princeton University Press, 1993; T. J. Pempel, *Regime Shift: Comparative Dynamics of the Japanese Political Economy*, Ithaca, NY, and London, Cornell University Press, 1998; and Ian Neary, *The State and Politics in Japan*, Cambridge, Polity, 2002.

[10] John Welfield, *An Empire in Eclipse: Japan in the Postwar American Alliance System*, London, Athlone Press, 1988; Donald C. Hellmann, 'Japanese Politics and Foreign Policy: Elitist Democracy Within an American Greenhouse', in Takashi Inoguchi and Daniel I. Okimoto (eds), *The Political Economy of Japan Volume Two*, Stanford, CA, Stanford University Press, 1988, pp. 345–78. Yoshida was prime minister in 1946–47 and 1949–54.

[11] Calder, 'Japanese Foreign Economic Policy Formation', p. 519.

[12] John Chapman, Reinhard Drifte and Ian Gow, *Japan's Quest for Comprehensive Security: Defence, Diplomacy and Dependence*, London, Frances Pinter, 1983; Umemoto

Blaker calls 'omni-directional diplomacy',[13] a policy prescription floated in the aftermath of the oil crisis of October 1973. Founded on a perception of Japan's helplessness in the face of 'resource nationalism' this strategy (or perhaps, non-strategy), which committed Japan to 'being friendly with everybody, or at least not making serious enemies anywhere',[14] was bound to fail because of Japan's Cold War alliance with the United States. As already noted, this alliance not only tied Japan into the global struggle against state-sponsored communism but also indirectly involved Japan in conflicts in the Middle East and elsewhere. In such circumstances being 'friendly' with everyone could never be an option even if it made good political sense.

There is to this day no exact, agreed definition of the term comprehensive security (an ambiguity perhaps deliberately intentioned so as to allow Japan to re-militarize) but it is commonly understood to broaden the scope of security beyond its traditional concern with military power to embrace economic and political power, information and diplomacy. Further, security is to be assured at a number of levels – global, regional and national – and guided by the following considerations: 'First, what steps could be taken by Japan to maximise its own self-reliance? Second, how could Japan turn developments in the international environment to its advantage? Third, how far could Japan modify its environment in its favour?'.[15]

On paper comprehensive security signalled a big step away from the passivity and reactivity associated with Japan's total reliance on the US military and diplomatic umbrella. It was certainly a more attractive basis upon which to engage with the rest of the world than omni-directional diplomacy. In practice, however, the enunciation of a foreign policy based upon the attainment of comprehensive security did not result in many concrete changes. It did serve to

Tetsuya, 'Comprehensive Security and the Evolution of Japan's Security Posture', in Robert A. Scalapino, Seizaburo Sato, Jusuf Wanandi and Sung-joo Han (eds), *Asian Security Issues: Regional and Global*, Berkeley, CA, Institute of East Asian Studies/ University of California, 1988, pp. 28–49.

[13] Michael Blaker, 'Evaluating Japan's Diplomatic Performance', in Gerald L. Curtis (ed.), *Japan's Foreign Policy after the Cold War: Coping with Change*, Armonk, NY, M. E. Sharpe, 1993, pp. 6–7.

[14] Okita Saburo, 'Natural Resource Dependency and Japanese Foreign Policy', *Foreign Affairs*, 52: 4 (1974), p. 723.

[15] Chapman et al., *Japan's Quest for Comprehensive Security*, p. xvii.

undercut a number of limits to Japanese rearmament and militarization that had become public policy after Japan regained its sovereignty in 1952.[16] It also brought about some organizational changes within the government structure. What it did not do was separate Japan from Washington's apron strings in any meaningful way in either the strategic or economic spheres.

In fact many of Japan's efforts to put policies associated with comprehensive security into practice have actually been rather passive. Efforts to achieve self-reliance have involved, for example, keeping Japan's rice market firmly closed, the stockpiling of oil, diversification of oil supply, energy conservation measures and the development of new energy sources such as nuclear and hydroelectric power, natural gas and renewable sources (more on this below). When they have been attempted, more active measures such as the extension of Overseas Development Assistance (ODA) have sometimes badly misfired amidst accusations that these have been designed to turn developments in the international environment to Japan's advantage rather than to alleviate poverty or promote economic development.[17] Finally, efforts to transform the international environment in its favour have led to similar accusations that Japan is only capable of conducting 'cheque book diplomacy', and that far from trying to bolster US leadership it is actually trying to contest it.[18]

Despite the adoption of comprehensive security as a guide to strategy Japan has failed both to shake off its reputation as a passive, reactive state and to carve out an independent diplomatic niche of its own. This is to some extent both a cause and a consequence of its failure to overcome problems associated with its resource dependence, and it is to case studies of three areas of this dependence that we now turn.

[16] These included a ban on overseas despatch of the Self-Defence Forces (SDF), the 'non-nuclear-principles' (never to possess, produce or introduce nuclear weapons into Japan), a ban on weapons exports (even to the USA) and a limit on defence-spending as a proportion of gross national product of 1 per cent or less.

[17] Dennis T. Yasutomo, *The Manner of Giving: Strategic Aid and Japanese Foreign Policy*, Lexington, MA, Lexington Books, 1986; Margee M. Ensign, *Doing Good or Doing Well?: Japan's Foreign Aid Program*, New York, Columbia University Press, 1992.

[18] Dominic Kelly, *Japan and the Reconstruction of East Asia*, Basingstoke, Palgrave, 2002; David P. Rapkin and Jonathan Strand, 'The US and Japan in the Bretton Woods Institutions: Sharing or Contesting Leadership?', *International Journal*, 52 (1997), pp. 265–96.

RICE

Agriculture has been the Achilles heel of trade negotiations since the advent of the Bretton Woods era. So powerful have been the array of forces – symbolic, social, economic and political – marshalled in its protection that agriculture did not even make it onto the agenda of world trade negotiations until the Uruguay Round (1986–94) and even then the outcome of the negotiations was largely shaped by deals done between the two key actors, the USA and EU.[19]

In the context of agricultural negotiations Japan left the field of conflict largely to the two main protagonists. As the world's largest food importer Japan's initial position was to support reform of the distorting effects caused by export subsidies but to remain firm on market access, in particular on rice where its stated intention was to maintain a total ban on imports.[20] Underpinning this ban was the argument that agriculture should continue to be a special case since it performs multiple functions such as providing food security in staple foods, stimulating rural economies and providing employment, preserving the environment and so on. In other words, Japan adopted the standard defence for continued agricultural protection common throughout much of the industrialized world.[21]

Despite adopting this strong position, however, once the smoke had cleared from the US–EU negotiations the Japanese delegation faced the full force of US pressure. This pressure widened existing cracks in domestic support for Japan's closed rice market, and the Japanese ended up conceding rather more than they had initially bargained for.[22] Phased reductions on a wide range of agricultural products were to take place and the overall level of agricultural support was to be reduced by 20 per cent. More significantly, Japan committed to the opening of its rice market, allowing for imports equivalent to 4 per cent of domestic consumption from 1995 rising

[19] Alan Swinbank and Carolyn Tanner, *Farm Policy and Trade Conflict: The Uruguay Round and CAP Reform*, Ann Arbor, University of Michigan Press, 1996.

[20] Rapkin and George, 'Rice Liberalization and Japan's Role in the Uruguay Round'.

[21] John Croome, *Reshaping the World Trading System: A History of the Uruguay Round*, Geneva, World Trade Organization, 1995, pp. 112–13, 234–5.

[22] Christopher C. Meyerson, *Domestic Politics and International Relations in US–Japan Trade Policymaking: The GATT Uruguay Round Agricultural Negotiations*, Basingstoke, Palgrave, 2003.

to 8 per cent in 2000–1. In 1999 this absolute quota was converted into a tariff-rate quota that allowed the minimum access requirement to be reduced to 7.2 per cent of domestic consumption.

Such a climb-down is remarkable given that as a staple food, form of currency and cultural symbol rice has historically been central to the political economy of Japan and has been, as a consequence, fiercely protected by a powerful political machine. The analysis that follows examines the origins of that political machine and the waxing and waning of its power – with the emphasis falling on the technical, social, economic and political aspects of rice production and the manner in which these are mediated by structures and processes associated with the management of the economy and society. Preceding this part of the analysis, however, is an examination of the cultural foundations upon which protection of Japan's rice market ultimately rests. The emphasis here is on the role of rice as a staple food and a cultural symbol and treasure central to the representation of the Japanese to themselves and to others.

Culture and Identity in a Rice Economy

Analysing the place and role of culture – how 'traditional patterns of meaning persist and are made vital in the present' – in political economy is no easy task.[23] There is the question of the co-constitution of structure and agency (do individuals and institutions shape culture or vice versa and which is more important at what times?) and the attendant dynamism of any culture. There is the question of the official sponsorship and manipulation of 'myth' in the national interest and in the interests of dominant segments of society (when does myth become reality, and whose 'reality' is it?). There is the question of boundaries – where does one culture begin and another end, or, put another way, what are the salient features of an individual culture and can these be separated meaningfully from each

[23] The quotation is from Daniel I. Okimoto and Thomas P. Rohlen (eds), *Inside the Japanese System: Readings on Contemporary Society and Political Economy*, Stanford, CA, Stanford University Press, 1988, p. 1. For an analysis of the Japanese case see Robert J. Smith, 'The Cultural Context of the Japanese Political Economy', in Shumpei Kumon and Henry Rosovsky (eds), *The Political Economy of Japan Volume 3: Cultural and Social Dynamics*, Stanford, CA, Stanford University Press, 1992, pp. 13–31.

other and from similar features exhibited by another culture? These and other questions are all important in an analysis of Japan, and especially so when one considers just how much 'culture' Japan has imported from China, East Asia and the West, including language, ideas, philosophies, technology and business practices.

In this instance, however, the difficulties associated with incorporating culture into the analysis can be set to one side since the primary focus here is on the consequences for Japan's resource diplomacy rather than its causes. Thus it does not really matter that rice is not native to Japan (having been introduced from Asia in around 350 BC), that it is an open question whether rice is a staple food, that it is surrounded by and associated with myths actively designed to cement the power, first of the imperial family and later the modern Japanese state, or that its continued protection might have as much to do with the bureaucratic 'Food Control System' created during the war years than it has with its proximity to the Japanese heart, soul and spirit.

What matters is that the protection of Japan's rice market rests partly on cultural arguments and that these arguments do have some force. Much of this force stems from the use of folklore and folk religion in the creation of myth histories of Japan and the rituals, public and private, that have become established as a consequence. Equally, much of it stems from the many and varied uses to which rice has been put in the everyday lives of the population at all levels in the social hierarchy. These are introduced briefly below.

Rice in Ritual and Everyday Life

The cultivation of rice in Japan is celebrated in the two most important Shinto creation myth texts – the *Kojiki* (AD 712) and *Nihonshoki* (AD 720). Commissioned by the Tenmu emperor (r. AD 672–686) as an official history of the imperial system in response to a growing fear of the pervasive influence of Tang China, they were written over a significant period of time and draw upon agrarian folklore and ritual, and particularly rice harvest rituals, in their creation/depiction of official court rituals.

Such rituals include the ritual of imperial accession, which requires offerings of rice to the gods. As is only to be expected with the laying down of myth histories, there are a large number of

variations.[24] According to one of these, the Japanese emperor is the embodiment of Ninigo-no Mikoto (the god of the ripened rice plant) and grandson of Amaterasu Omikami, the Japanese sun goddess.[25] On the occasion of his descent from heaven Amaterasu gave her grandson the original rice seeds that she had herself harvested from the two fields in heaven. He subsequently planted these seeds, transforming Japan into the 'Land of Abundant Rice' that it is today.

The imperial accession ritual is an echo of this tale. The emperor first (symbolically) enters the womb of Amaterasu whereupon his soul is rejuvenated, perhaps by being replaced by the soul of his recently deceased predecessor. He then offers a variety of foods to the deity, the most important of which are rice products (cooked rice, gruel and sake) grown specially in two fields in central Japan. The emperor and the deity then consume these foods together in private before the emperor moves on to a public banquet with his mortal guests.[26]

The imperial accession ritual indicates that Japanese emperors rule with an authority derived from the sun goddess herself, from whom they are directly descended, and that the continuation of this authority is manifest as an abundance of rice and rice products. Clearly there has been some 'slippage' in the relationship, most markedly since Emperor Hirohito was forced to renounce his divinity after Japan's defeat in the Second World War. Nevertheless, to this day, each year within the imperial grounds the emperor plants rice

[24] The most comprehensive account I have seen is Emiko Ohnuki-Tierney, *Rice As Self: Japanese Identities through Time*, Princeton, NJ, Princeton University Press, 1993.

[25] A short summary of Japan's mythological origins is as follows: 'the islands of Japan were created by a god and goddess named Izanagi and Izanami, who leaned down from the floating bridge of heaven and stirred the ocean with a jewelled spear. The first island was formed from drops of brine which fell from the spear as it was lifted out. The heavenly couple descended to this island where they gave birth to what is referred to as an Eight Island Country. The sun goddess, Amaterasu, the ultimate ancestress of the imperial line . . . was then created out of a bronze mirror held in Izanagi's left hand'. Some time later Amaterasu sent her grandson down from heaven whereupon, in the Yamato plain in central Honshu, 'he established a palace on the first day of spring in 660 BC and became the first Emperor Jimmu'. Joy Hendry, *Understanding Japanese Society*, 2nd edition, London, Routledge/Nissan Institute, 1995, pp. 8–9. Thus, so the story goes, began the current imperial line, and it is worth noting that this was the official history taught in Japanese schools until 1945.

[26] Ohnuki-Tierney, *Rice as Self*, pp. 48–53.

seeds, transplants the seedlings and harvests a small plot of rice before ritually offering it to – and sharing it with – the gods.[27] As Ohnuki-Tierney suggests 'From the emperor's perspective, the harvest ritual is an important personal and political right of passage that ensures the renewal of his soul and his political power'.[28]

This commensality is a feature of most rituals and a feature of everyday life in Japan.[29] Rice and rice products are thus central to commensality in all its forms. To cite just three examples, in most Japanese households rice remains the one food product that is served from a communal bowl by the woman of the house. Indeed, before the invention of the electric rice cooker her skill at cooking rice was often used as a measure of her overall competence as a housewife. Moreover, in many homes before rice is consumed a portion of it is still offered to the ancestors residing within the family ancestral alcove, and no other product can serve in this role. Finally, sake, or rice wine, is the traditional item of commensality for men. After-hours drinking between 'salarymen' is, of course, legendary. Less familiar is the ritual pouring of the drink, the rules of which dictate that no-one should ever pour their own. Thus while solitary drinking is a fact of life for many, drinking sake by oneself is taboo.

There are a number of other areas of life where the importance of rice and rice products is manifest. Rice is seen as a source of spiritual power, of physical strength and well-being. It is fed as gruel to women after childbirth and to young people and the sick and elderly. Rice cakes are eaten on special occasions marking rites of passage such as at New Year and at the heart of the agricultural season.

Rice is also a source of aesthetic pleasure in both its raw and cooked forms. It is the foundation upon which innumerable songs, poems and artistic works have been created. These celebrate the smell, colour, texture and taste of rice – with an emphasis on the whiteness of colour, the 'stickiness' of texture and the unique 'tastiness' of Japanese rice which cannot be matched by foreign, or inferior, varieties no matter how closely related in genetic terms. The purity and quality of this rice indicates the superiority of Japan over other countries, a 'fact' that has proven useful to many champions

[27] Richard H. Moore, *Japanese Agriculture: Patterns of Rural Development*, Boulder, CO, Westview Press, 1990, p. 4.

[28] Ohnuki-Tierney, *Rice as Self*, p. 56.

[29] Ibid., chs 4, 5 and 6. See also Moore, *Japanese Agriculture*.

of Japanese uniqueness.[30] Much artwork, of which the woodblock print is one of its premier forms, celebrates the unchanging nature of Japan and the Japanese by depicting a landscape dominated by rice paddies. These depictions serve also as a reminder of the passage of the seasons, and are recognized as such throughout Japan and not just in agricultural communities. They are, in other words, universally recognized symbolic representations of Japan.

Finally, rice is an indicator of wealth. We have already noted its role as a form of monetary exchange, prevalent of course during the feudal – or Early Modern – period (1603–1868), when control of the rice crop maintained the power of the *samurai* and their place in a physiocratic system above peasants, artisans and merchants. It is worth noting, moreover, that rice had been taken as a tax by regional and central governments as early as the Medieval period (1185–1392), which means that the Japanese rice market has been controlled continuously for about 1,000 years.[31] Perhaps more importantly there is also a religious element to this exchange. Building on other research Ohnuki-Tierney suggests that markets, taxation and interest were in fact religious institutions and practices throughout the Ancient (300 BC–AD 1100) and Medieval periods.[32] During this time the authorities, governments, temples and shrines loaned unhulled rice seeds to peasants in return for a share of the crop, including an interest payment. This practice echoed the gift and ritual sharing of the original 'heavenly' rice seeds noted above.

It is this religious element that Ohnuki-Tierney identifies as one source (amongst many) of peasant unrest during the Early Modern period.[33] Quite apart from its use in ritual, an abundance of rice is intimately wrapped up in notions of wealth being granted as a sacred gift from a stranger deity. This gift, according to folklore, was often bestowed on those whose good deeds were conducted with no thought for their own advantage. Greed, in other words, was frowned

[30] For discussion see Peter Dale, *The Myth of Japanese Uniqueness*, London, Croom Helm, 1986; Carol Gluck, *Japan's Modern Myths: Ideology in the Late Meiji Period*, Princeton, NJ, Princeton University Press, 1985; Thomas Havens, *Farm and Nation in Modern Japan*, Princeton, NJ, Princeton University Press, 1974; and Kosaku Yoshino, *Cultural Nationalism in Contemporary Japan*, London, Routledge, 1992.

[31] Ohnuki-Tierney, *Rice as Self*, pp. 15–17.

[32] Ibid., pp. 67–74.

[33] Ibid., pp. 77–8.

upon by the gods. In this context the good life was associated with an abundance of rice, and peasant uprisings were often expressions of dissatisfaction with local people in authority (officials, priests, moneylenders and so on) thought to be hoarding wealth at the expense of others.

As with any discussion of such an esoteric nature there is a danger of over-explanation – of attributing to the Japanese a sensitivity to their history and culture that most simply do not possess. For many, rice undoubtedly signifies nothing more than a cheap accompaniment to a meal. Nevertheless, for some, and particularly for the older generations rice retains many of the cultural resonances outlined above.[34] For these people rice plays a central role in how they live their lives. To take a final example, Ohnuki-Tierney makes the point that for many people, rice is so important to their eating experience that even if they have partaken of a large meal they do not feel full if rice has not been included.[35] Combined with the desire to eat the 'unique' Japanese variety of rice, this alone goes a long way toward explaining why the Japanese rice market is so heavily protected. As the next section will demonstrate, upon this cultural foundation a mighty fortress of protection has been built by farmers and their representatives.

The Food Control System

It is no accident that protectionist arguments based upon the significance of Japan's rice culture began to be heard from the 1960s onwards. This was the time, after all, when the United States first began to pressure Japan either to open its markets or to accept voluntary export restraints. It was also the time when rice effectively lost its position as a critical wage good. Between 1868 (which marks the beginning of the Modern era) and 1960 successive governments intervened in the rice market with the express intention of holding

[34] The rice/wheat division should not be over-emphasized. In fact, along with other grains, wheat was cultivated in Japan long before the introduction of rice. What makes rice so special in this instance is its symbolic resonance – a resonance that wheat and other grains cannot match.

[35] Ohnuki-Tierney, *Rice as Self*, pp. 41–2.

the price of rice within an upper and lower boundary.[36] This had a number of purposes. First it contributed to industrial development by holding down prices and wage demands at a time when Japanese industry was at its most labour intensive; and secondly it placed a floor below which agricultural wages would not drop, thus preventing social unrest in the countryside, encouraging domestic production and thereby preserving foreign exchange that was required for industrialization.

By 1955, however, everything had changed. Japan had effectively recovered from the destructive effects of the war era and embarked upon its 'miraculous' period of economic growth. In this new context industrial wages began to outstrip agricultural wages, sparking political pressure from farmers for an increase in the price of rice which at this point constituted about 40 per cent of the total value of agricultural output.[37] In combination with the broad cultural platform introduced above, this pressure succeeded for a number of specific reasons to be explored shortly. Preceding all these, however, and providing the context for them, was the decline of rice as a critical wage good. As industrial wages continued their upward momentum demand for rice began to fall as consumers widened their diets to include more meat, vegetables and other dairy products, while food as a proportion of consumer expenditure (the Engel coefficient) steadily declined.[38] As a consequence, rice (and agriculture as a whole) could be protected without endangering economic growth and without provoking a political backlash from consumers.

The means by which protection was secured was the operation of what is commonly known as the 'Food Control System'.[39] This had its origins in the inter-war period and consisted of a series of rules and regulations designed to ensure security of supply of a variety of 'staple'

[36] Penelope Francks, with Johanna Boestel and Choo Hyop Kim, *Agriculture and Economic Development in East Asia: From Growth to Protectionism in Japan, Korea and Taiwan*, London, Routledge/ESRC Pacific Asia Programme, 1999, p. 84; and Yujiro Hayami, 'Rice Policy in Japan's Economic Development', *American Journal of Agricultural Economics*, 54: 1 (1972), p. 21. At various points Japan actively imported rice. Penelope Francks, 'Rice for the Masses: Food Policy and the Adoption of Imperial Self-Sufficiency in Early Twentieth-Century Japan', *Japan Forum*, 15: 1 (2003), pp. 125–46.

[37] Hayami, 'Rice Policy in Japan's Economic Development', p. 27.

[38] Ibid., p. 26.

[39] For a comprehensive analysis see Aurelia George Mulgan, *The Politics of Agriculture in Japan*, London, Nissan Institute/Routledge, 2000.

foods, including rice. Its core components were the Food Agency of the Ministry of Agriculture, Fisheries and Food (MAFF), rice producers represented by their agricultural cooperatives (Nōkyō), and rice retailers and wholesalers who handled the distribution.[40] The interests of these separate actors overlapped at all levels, from the household to the village, region, prefecture and upwards to the national government and were held together by ties of economic circumstance and political patronage.[41] The legal basis of the system was provided by the Food Control Law of 1942 which had brought all aspects of the production, distribution and consumption of food under government control. This was supplemented during the Occupation by a series of laws designed to do away with the system of paying rents in kind and to democratize agricultural production through spreading ownership and encouraging owner-farmers to organize in agricultural cooperatives.[42]

Less formally the system was bound together by social relationships emerging from the small scale of farming, the cooperative nature of wet-rice agriculture (planning, digging and maintaining irrigation channels and terracing, and the shared usage of power-tillers and other technology), the patchwork nature of paddy ownership (boundary maintenance and shared irrigation) and the seasonal nature of the work which, at times, requires high levels of

[40] It is difficult to convey the depth and extent of the power of Nōkyō at this time. In the mid-1980s it had an individual membership of 8 million, making it the largest voluntary mass grouping in Japan. More importantly its operations extend into every aspect of farming and farmers' lives, catering to their economic, social, cultural and welfare needs as well as organizing politically on their behalf. In its prime it had 350,000 employees, making it the largest employer in Japan, was the country's biggest insurer and its banking business amounted to about half of the total held in the legendary national postal system. These details from Aurelia George and Eric Saxon, 'The Politics of Agricultural Protection in Japan', in Kym Anderson and Yujiro Hayami (eds), *The Political Economy of Agricultural Protection: East Asia in International Perspective*, London, Allen & Unwin, 1986, pp 94–7. Updated details, including its relative decline, can be found in George Mulgan, *The Politics of Agriculture in Japan*.

[41] Aurelia George, 'The Politics of Interest Representation in the Japanese Diet: The Case of Agriculture', *Pacific Affairs*, 64: 4 (1991–92), pp. 506–28.

[42] Ronald Dore, *Land Reform in Japan*, Oxford, Oxford University Press, 1959; Yutaka Yoshioka, 'Development of Agricultural Policy in Postwar Japan', in William T. Coyle, Dermot Hayes and Hiroshi Yamauchi (eds), *Agriculture and Trade in the Pacific: Toward the Twenty-First Century*, Boulder, CO, Westview Press, 1992, pp. 91–100.

cooperation and team work that a family would find difficult to manage by itself.[43]

On its own this system, arguably the most sophisticated and pervasive of its kind anywhere in the world, could have brought considerable pressure to bear on any government even given the slow fall in the percentage of the workforce employed in agriculture.[44] However, in the Japanese case two other factors have combined to preserve and extend the political power of the rural electorate.[45] First, the reluctance of landholders to sell their land and give up farming altogether has meant that the rural electorate has remained politically significant even as the farm sector has become relatively less important in economic terms. Second, electoral malapportionment has added considerably to the political power of farmers and their representatives. This malapportionment, in effect a negative gerrymander, arose as a consequence of rapid urbanization and a failure of the party of government, the conservative LDP, to adjust electoral boundaries in order to compensate for population movements. Such was the extent of the imbalance that at the extremes the difference in voting values for elections to the upper house (the House of Councillors) between the least populated and most densely populated districts widened from 1.25:1 in 1947 to 6.59:1 in 1992. The corresponding figures for elections to the lower house (the House of Representatives) widened from 1.51:1 in 1947 to a peak of 4.99:1 in 1972.[46] In other words, by 1972 one rural vote was worth five urban votes in elections to the more powerful of the two houses of the Japanese parliament. This helped keep the LDP in power continuously from 1955 to 1993 and still contributes to its electoral success in the coalition era, albeit to a lesser and declining extent.

[43] Francesca Bray, *The Rice Economies: Technology and Development in Asian Societies*, Oxford, Basil Blackwell, 1986; Penelope Francks, *Japanese Economic Development: Theory and Practice*, London, Routledge, 1992, ch. 7.

[44] Japan's farm household population halved between 1960 and 1994, and the number of people engaged in farming as residents of commercial farm households fell from 17.7 million in 1960 to 7.9 million in 1993. Only 3 million people, or 5 per cent of the working population, were engaged in farming as a principal occupation in 1993, down from 12.7 million or 28.7 per cent of the working population in 1960. Aurelia George Mulgan, 'Electoral Determinants of Agrarian Power: Measuring Rural Decline in Japan', *Political Studies*, 45 (1997), pp. 875–99.

[45] George and Saxon, 'The Politics of Agricultural Protection in Japan'.

[46] George Mulgan, *The Politics of Agriculture in Japan*, p. 33.

In such circumstances it is little wonder that support for the protection of Japan's rice market carried all before it from 1960 onwards. The price of rice paid to farmers by the government doubled between 1960 and 1968 and this, combined with non-farm income, served first to narrow the income gap between rural and urban households and then close it completely.[47] By the mid-1960s the situation had been reversed; rural incomes surpassed urban incomes, a gap that would continue to grow into the 1990s.[48]

However, the solution to one problem became the cause of several others. First, government outlays soared as the share of the Food Control System in the agricultural budget grew from 17 per cent in 1960 to 46 per cent in 1970[49] and the agricultural budget grew from 9.5 per cent of the total budget in 1960 to 12.1 per cent in 1970.[50] Second, high prices coupled with falling demand led to a surge in production without a corresponding rise in consumption, a situation that left the government holding huge stocks of rice that it could not unload onto international markets because of the outcry that such an action would provoke, particularly in the context of the Kennedy Round (1963–67).[51] Thus government stocks of rice rose from 50,000 tonnes in 1965 to a peak of over 7 million tonnes in 1970.[52]

The Decline of the Food Control System and the Opening of the Rice Market

In such circumstances it seems reasonable to assume that the government might try to put the brakes on even in the face of trenchant opposition, and this is in fact what happened, beginning in 1968 when the government buying-price for rice remained virtually

[47] Hayami, 'Rice Policy in Japan's Economic Development', p. 27.

[48] Ibid.

[49] Ibid., p. 19.

[50] Francks, with Boestel and Choo Hyop Kim, *Agriculture and Economic Development in East Asia*, p. 89. This became a burden because until the 1990s, with a few exceptions, the government buying-price from rice producers was consistently higher than its selling price to consumers. The gap between the two prices was of course a consequence of pressure from farmers for ever-higher prices in tandem with falling demand from consumers as outlined above.

[51] George and Saxon, 'The Politics of Agricultural Protection in Japan', pp. 101–2.

[52] Penelope Francks, 'Agriculture and the State in Industrial East Asia: The Rise and Fall of the Food Control System in Japan', *Japan Forum*, 10: 1 (1998), p. 14.

unchanged for two years. Then, in 1969, the government introduced a new distribution channel for the more exclusive types of rice that entrepreneurs had already begun to sell illegally to discerning customers. This channel bypassed the Food Agency, allowing the cooperatives to sell rice directly to wholesalers. This *jishu* (autonomous/voluntary) rice market, which constituted 71 per cent of official sales in 1994, did not reduce the total amount of rice grown but did serve to ease the pressure on government expenditures since the government was not obliged to buy it.[53]

In addition, in 1971 the government initiated a programme of incentives designed to persuade farmers to take land out of cultivation. This featured the usual mix of carrots (subsidies, direct payments) and sticks (reductions in individual allocations of rice sales for the coming year and threats of loss of subsidies to the village as a whole if individual farmers did not meet their target).[54] This was matched by a programme of agricultural liberalization that resulted in the market opening for grapes, apples, tea, bacon, pork, vegetable oils, refined sugar and a number of other products. At the same time, a tariff reduction of 20 per cent was made on 146 agricultural items, leaving only 22 items on the restricted import list including beef, dairy products, oranges and citrus juices.[55]

Through all this the rice market remained firmly closed, and yet still farmers punished the LDP in the 1971 general election, prompting a reappraisal of liberalization efforts.[56] This reappraisal was hardened by a series of events in the 1970s including the world food crisis which resulted in soaring prices and a 50 per cent reduction in world grain stocks, the temporary US embargo on soya bean exports upon which Japan was dependent for 80 per cent of its supply, and the oil crisis of 1973. These events, and others that were to follow, convinced the Japanese public and the government that resource security in

[53] Ibid., p. 9.

[54] Ibid., p. 10.

[55] George and Saxon, 'The Politics of Agricultural Protection in Japan', pp. 101–2.

[56] This happened again in 1989 when the LDP lost its majority in the upper house following Prime Minister Nakasone's 1987 decision to cut the producers' rice price by 6 per cent, the first reduction in 31 years. Only 59 per cent of farmers voted for LDP candidates in that year compared with 77 per cent who voted for the LDP in 1986. Meyerson, *Domestic Politics and International Relations in US–Japan Trade Policymaking*, p. 178.

both energy and staple foodstuffs was a goal worth making sacrifices for even in the face of international pressure for market liberalization.[57] In this context the Japanese government resisted US pressure for agricultural liberalization during the Tokyo Round (1977–79) and also fended off other countries, such as Australia, keen to benefit from Japanese consumers' growing penchant for meat. Instead, under the newly unfurled banner of 'comprehensive security' it embarked on an uncharacteristically aggressive campaign of resource diplomacy designed to secure stable supplies of oil and other strategic resources that took in the Middle East, South-East Asia and Latin America (more on this below).

Nevertheless, by the latter half of the 1970s Japan was facing a fiscal crisis that by 1980 had sparked a full-scale review of budgetary expenditures and priorities. With strong backing from the Ministry of Finance, and from industry which feared retaliatory US protectionism on Japanese manufactured goods, the government began reducing the subsidies and price supports directed towards agriculture in general and rice in particular.[58] In addition, small steps toward liberalization of certain agricultural products were taken although these were generally in favour of US producers and thus were clearly designed to reduce tensions between Tokyo and Washington.[59]

It is in this context that Japan's position on rice at the Uruguay Round should be seen. Strong rhetorical arguments in favour of continued blanket prohibition of rice imports drowned out but could not silence increasingly vocal support for a limited opening of the Japanese rice market as a necessary sacrifice if wider gains from the successful conclusion of the Uruguay Round were to be realized. Even so, it is unlikely that rice liberalization – such as it was – would

[57] These other events included the US grain embargo on the USSR following the invasion of Afghanistan, the implementation of the 200-mile exclusive fishing zone and negotiations on exploitation of deep seabed resources during the Third United Nations Law of the Sea Conference (UNCLOS III) (1973–80), and the 1979 oil shock. On UNCLOS III see Blaker, 'Evaluating Japan's Diplomatic Performance'. Although Japan was affected by the 1979 oil crisis it was not hit nearly so hard as it had been in 1973. Teruyasu Murakami, 'The Remarkable Adaptation of Japan's Economy', in Daniel Yergin and Martin Hillenbrand (eds), *Global Insecurity: A Strategy for Energy and Economic Renewal*, Boston, Houghton Mifflin, 1982, pp. 138–67.

[58] George and Saxon, 'The Politics of Agricultural Protection in Japan', p. 106.

[59] Ibid., pp. 108–9.

have been achieved if the LDP had not been driven from power in August 1993 after 38 years of uninterrupted rule. The new coalition government was led by Prime Minister Hosokawa Morihiro of the Japan New Party, and it was he who announced on 14 December 1993 – the last day of the Uruguay Round negotiations – that the government had agreed to the liberalization of Japan's rice market. One year later, in December 1994, the Diet approved the Uruguay Round agreements and a number of related bills including the Law for Stabilization of Supply–Demand and Price of Staple Food.[60] This law, also known as the New Food Law, replaced the Food Control Law of 1942 and signals what surely must be the beginning of the end for the Food Control System in Japan.[61]

OIL

If we can characterize contemporary Japan as the 'Land of Abundant Rice' the same cannot be said of its domestic oil reserves which stand at about 59 million barrels in 2004.[62] This equates to ten days' consumption at an estimated 5.57 million barrels per day. What this means for a highly industrialized economy like Japan is that it could not function without very large imports of oil. In fact, Japan is the world's fourth-largest consumer of energy and its second-largest importer behind only the United States. Japan consumes more oil than any other country except the USA and China. Sixty-two per cent of the electricity generated in Japan is derived from thermal plants (including oil, gas and coal), with the bulk of the remainder, 28 per cent, coming from nuclear reactors.[63] Oil supplied 49.7 per cent of

[60] Meyerson, *Domestic Politics and International Relations in US–Japan Trade Policymaking*, p. 89.

[61] For discussion see Francks, 'Agriculture and the State in Industrial East Asia', pp. 12–14. See also the *Submission of the USA Rice Federation for the 2004 Annual National Trade Estimate Report on Foreign Trade Barriers* which claims that 'despite Japan's Uruguay Round commitments, US rice does not enjoy meaningful market access'. Available at www.usarice.com/industry/gov/pop_2004NTE.html.

[62] Unless otherwise indicated the figures contained within the following two paragraphs were obtained from the Energy Information Administration, US Department of Energy at www.eia.doe.gov/emeu/cabs/japan.html.

[63] Hydroelectricity provides 8 per cent and renewable sources (wind, solar and geothermal) 2 per cent.

Japan's total energy needs in 2002, coal 18.9 per cent, nuclear power 13.7 per cent, natural gas 12.7 per cent, hydroelectric power 3.7 per cent and renewable sources 1.1 per cent. Imported fossil fuels supplied more than 80 per cent of Japan's energy needs in 2002.

Despite strenuous efforts to diversify its supply, in August 2004 Japan still sourced 87.9 per cent of its oil from the Middle East, principally from the United Arab Emirates (26.5 per cent of the Middle East total), Saudi Arabia (22.7 per cent), Iran (14.1 per cent), Qatar (10.9 per cent), and Kuwait (6.2 per cent).[64] This is the highest rate of dependency on oil (except for Italy), and oil from the Middle East, of any advanced industrial state.[65] Japan has struggled to secure a more diverse supply and, moreover, to exert greater control over the supply chain. After losing drilling rights in the Saudi Arabian portion of the Neutral Zone in the year 2000 Japanese firms have been exploring (equity) links with Iran, Azerbaijan, and Kazakhstan. Japanese firms are also exploring the possibility of building an oil pipeline from Siberia and routeing this either through China (Daqing) or Nakhodka on Russia's Pacific coast.[66]

All of these moves are designed to reduce Japan's dependence on oil from the Middle East. Stable supplies of Russian oil delivered through a new pipeline would be particularly valuable since these would bypass the Straits of Malacca and the Taiwan Straits, both potential choke points and flash points. As noted at the outset, however, the central problem is the absolute need to maintain stable, (relatively) low cost supplies from the Middle East – supplies that have in the past been threatened as a direct consequence of Japan's subordinate position within the US–Japanese alliance. Up until the 1970s at least, consistent albeit 'low-posture' support for US policy in the Middle East, and particularly its backing of Israel, soured Japan's relationship with its major oil suppliers. As is well known this eventually led to the oil embargo and price hikes of 1973, a situation for which the Japanese government was not in the least bit prepared –

[64] Ministry of Economy, Trade and Industry (Japan), *Preliminary Report on Petroleum Statistics (August 2004)*, available at www.meti.go.jp.

[65] Agency for Natural Resources and Energy, Japan, at www.enecho.meti.go.jp.

[66] Currently, however, the Russian Federation supplies only about 1.5 per cent of Japan's oil requirements. Ministry of Economy, Trade and Industry, *Preliminary Report on Petroleum Statistics*.

having built up an oil stockpile of only 49 days and no close diplomatic relationship with any Arab state.[67] This was not, however, Japan's first oil crisis.

Securing Japan's Pre-War Oil Needs

Japan's first oil crisis actually began in August 1941 following a decision taken in Washington to embargo US oil shipments to Japan from the first day of that month. This followed a protracted build-up as Japan's imperial ambitions rubbed ever more painfully up against the interests of major competing sovereign powers, and against the power of the oil majors.

The source of these tensions was two-fold. On the one hand there was the physical conquest of resource-rich territory that began in Korea and Taiwan, spread through Northern China, including Manchuria, and ended in South-East Asia. On the other hand there was a continued effort on behalf of the Japanese government to wrest control of parts of the oil business away from the oil majors, most of whom were American. Both strategies brought swift condemnation from other imperial powers. On the occasion of the implementation of the first Petroleum Industry Law in March 1934, for example, diplomatic intervention – including threats of embargo – quickly resulted in efforts to soothe foreign affiliates' concerns about discrimination against them contained within the law.[68] Again in 1934 the Japanese government faltered in the face of the 'rhetorical thunder' that rumbled out of London and Washington following its attempt to monopolize oil production and refining in its puppet state of Manchukuo.[69]

Pre-dating Japanese efforts to reduce dependence on oil from the Middle East, therefore, were similar efforts designed to escape from dependence on the USA, which at this point dominated the global

[67] Japan had, however, developed a web of commercial ties. Hiroshi Shimizu, 'The Japanese Trade Contact with the Middle East: Lessons from the Pre-oil Period', in Sugihara and Allen, *Japan in the Contemporary Middle East*, pp. 27–53.

[68] Richard J. Samuels, *The Business of the Japanese State: Energy Markets in Comparative and Historical Perspective*, Ithaca, NY, Cornell University Press, 1987, pp. 177–9.

[69] Raymond Vernon, *Two Hungry Giants: The United States and Japan in the Quest for Oil and Ores*, Cambridge, MA, Harvard University Press, 1983, p. 90.

oil business.[70] Indeed, in the early days all of Japan's oil supply came from either the US itself or the Dutch East Indies and was supplied by Standard Oil of New York (later Mobil).[71] In Japan's case Mobil, the Standard Oil Company of New Jersey (later Exxon) and Royal Dutch–Shell supplied not only the majority of the oil but the refineries and distribution networks as well.[72] As late as 1941 domestic production contributed less than 12 per cent of peacetime needs.[73] In these circumstances imperial Japan found itself squeezed between the foreign policies of the USA, Britain and Holland on the one hand, and the business strategies of the oil majors on the other.

When push came to shove, so important was oil to the functioning of the Japanese economy that the country was prepared to go to war with the USA over it, even though many in Japan believed that such a war could not be won. In fact it was coal that provided the major source of domestic energy at this point but it was oil that powered Japan's military machine and, therefore, enabled Japan to hold its empire together. Japan's advance into South-East Asia was primarily designed to secure access to the oil reserves of the Dutch East Indies but this area was also the source of other much-needed materials such as copper, tin, rubber, bauxite and many others. According to Lockwood, in 1930 Japan imported 100 per cent of its aluminium and rubber requirements. Other key imports included lead (92.8 per cent), iron and steel (85.3 per cent), petroleum (79.4 per cent) and tin (74.3 per cent).[74]

Securing Japan's Post-War Oil Needs

In defeat Japan faced a very different world, one where imperial competition tempered by the politics of the balance of power had been

[70] Daniel Yergin, *The Prize: The Epic Quest for Oil, Money and Power*, New York, Pocket Books, 1993.

[71] Vernon, *Two Hungry Giants*, p. 89. For an updated analysis see Tetsuo Hamauzu, 'The Changing Structure of Oil Connections', in Sugihara and Allen, *Japan in the Contemporary Middle East*, pp. 54–82.

[72] Vernon, *Two Hungry Giants*, p. 89.

[73] Jerome B. Cohen, *Japan's Economy in War and Reconstruction*, Westport, CT, Greenwood Press, 1973 (first published 1949), p. 133.

[74] W. W. Lockwood, *The Economic Development of Japan: Growth and Structural Change 1868–1938*, Princeton, NJ, Princeton University Press, 1954, p. 388.

replaced by a bipolar struggle between nuclear-armed superpowers engaged in a protracted Cold War. Not only had the Japanese Empire and all its resources disappeared but so too had all but formal independence from the USA.[75] Thus, in securing Japan's post-war oil needs the United States remained a crucial variable in Japanese calculations.

The 1950s and 1960s are seen as the 'miracle' years for the Japanese economy, a time during which Japan not only recovered from the effects of militarism and war but raced ahead of every other economy in terms of economic growth rates which averaged roughly 10 per cent over the whole period.[76] While there are a variety of often competing explanations for this success and its consequences, there is no doubt about the centrality of oil in the process.[77] In the 30 years following the end of the war, Japan's energy consumption rose tenfold and the relative share of petroleum in its provision went from 5 to 72 per cent.[78] Moreover, by the 1970s the Middle East had replaced the US as Japan's major supplier of oil – delivering 77.3 per cent of the total.[79]

In securing their country's oil requirements Japan's leaders faced a series of difficulties. First, in light of traditions demanding that Japan remain free from foreign interference and debt, and faced with a shortage of foreign exchange the country needed to balance its long-term import requirements against export earnings. This required a trade strategy built around the promotion of exports and, where possible, the restriction of imports.[80] Second, this trade strategy initially had to take account of the loss of traditional markets

[75] Welfield, *An Empire in Eclipse*.

[76] Between 1954 and 1958 the average growth rate in real GNP was 7.0 per cent. This same figure was 10.8 per cent for 1959–63, 10.9 per cent for 1964–68, and 9.6 per cent for 1969–73. Shigeto Tsuru, *Japan's Capitalism: Creative Defeat and Beyond*, Cambridge, Cambridge University Press, 1993, p. 67.

[77] See above, n. 9.

[78] Tsuru, *Japan's Capitalism*, p. 151.

[79] Disaggregated the percentage figures in 1993 were: Saudi Arabia 33.8, Iran 17.0, United Arab Emirates 11.4, Kuwait 8.3, Oman 3.7 and Iraq 3.1. Indonesia (13.6 per cent) and Brunei (3.4 per cent) supplied the bulk of the remaining balance. Tsuru, *Japan's Capitalism*, pp. 152–3. The USA became an importer of oil as early as 1949.

[80] Dominic Kelly, 'The Political Economy of Japanese Trade Policy', in Dominic Kelly and Wyn Grant (eds), *Trade Politics in the Twenty-first Century: Actors, Issues, Regional Dynamics*, Houndmills, Palgrave, 2005, pp. 330–45.

ranging from China to Europe as a consequence of Japan's subordination within the US alliance and a reluctance to do business with a former enemy.[81] Third, as introduced above, Japan had to overcome technical and other difficulties related to the historical evolution of the oil industry itself.

Coming to terms with these problems has been a long process, as yet incomplete, but one facilitated by the adoption of a policy of *seikei bunri,* the separation of politics from economics, in Japanese foreign policy in accordance with the diktats of the Yoshida Doctrine. Most significant in allowing Japan to support the regime in Taiwan whilst simultaneously trading with the Chinese mainland, this separation allowed Japan officially to follow the US line but to pursue, within limits, objectives of its own through unofficial channels forged by businessmen, and by diplomats and bureaucrats acting in their 'private' capacities.

Despite these constraints Japan's relationship with the USA presented it with a number of opportunities. In line with its broad mission to foster an open, liberal democratic (trading) order in the non-communist world, Japanese goods were accepted freely into the US market at a time when Japanese markets for US goods were effectively closed. In addition, the USA compensated Japan for the loss of the Chinese market by facilitating Japan's re-entry into South-East Asia as well as sponsoring Japanese membership of the various international institutions that it dominated. As a consequence, and broadly speaking, Japan's trade strategy very quickly began to revolve around the importation of raw materials largely from South-East Asia, Africa, Latin America and the Middle East and the export of manufactured goods to the USA and, later, European and South-East Asian markets.[82]

[81] US sponsorship of Japan's entry into the General Agreement on Tariffs and Trade (GATT) in 1955 met with some opposition from European members, several of whom exercised their right not to apply GATT provisions to Japan.

[82] Victor Argy and Leslie Stein, *The Japanese Economy*, Basingstoke, Macmillan, 1997, ch. 9; and Kaoru Sugihara. 'Japan, the Middle East and the World Economy: A Note on the Oil Triangle', in Sugihara and Allen, *Japan in the Contemporary Middle East*, pp. 1–13. Africa, and particularly South Africa, has been a key source of minerals. See Chapman et al., *Japan's Quest for Comprehensive Security*, ch. 8. Latin America has been particularly important in terms of its mineral wealth. See Barbara Stallings and Gabriel Székely (eds), *Japan, The United States, and Latin America: Toward a Trilateral Relationship in the Western Hemisphere?*, Basingstoke, Macmillan, 1993.

However, as early as the mid-1950s US industry was seeking protection from Japanese imports as described above. This resulted in the adoption by Japan of a voluntary export restraint (VER) on cotton from December 1955. This was followed by VERs on steel (1972), television sets (1977), automobiles (1981) and semiconductors (1986). Moreover, just as US goodwill towards its junior ally slowly seeped away through the 1950s and 1960s, culminating in the 'Nixon Shocks' of the early 1970s, so too did the Japanese view of US policy begin to sour.[83] It was not just the Japanese economy that was growing but the confidence of its leaders, some of whom quietly began to lay the blame for the poor state of the US economy at its own door. Critics were, however, careful to talk up Japan's responsibility to help its ailing ally for the sake of maintaining the stability of the wider relationship and order.

Be that as it may, to the increasing trade friction was added, by the 1970s, tensions in the wider US–Japanese alliance and also problems in South-East Asia as Japan's re-emergence as an economic force – all too reminiscent of the Greater East Asian Co-Prosperity Sphere – led to ill-feeling throughout the region. This was exacerbated by the US pursuit of anti-communism throughout the globe, and prosecution of the Vietnam War in particular, which threatened to damage Japan's carefully constructed image as a pacifist state.[84]

This same pattern – caution, cordiality, disillusionment and conflict – obtained in the private sphere over the same period, although the domestic structure of US policy-making certainly resulted in a time lag between growing business dissatisfaction and political action to meet their needs. This dissatisfaction was driven by two main concerns. First the continued inability of US firms to gain access to a market that by the 1970s was second only in size to that of the US

[83] Stephen D. Cohen, *An Ocean Apart: Explaining Three Decades of US-Japanese Trade Frictions*, Westport, CT, Praeger, 1998.

[84] US troops used Japan both as a base of operations and as a location for rest and recuperation throughout the Vietnam War. See Raul Manglapus, *Japan in Southeast Asia*, New York, Carnegie Endowment for International Peace, 1976; Sueo Sudo, *The International Relations of Japan and South East Asia: Forging a New Regionalism*, London, Routledge, 2002, pp. 34–5; and Glenn D. Hook, *Militarization and Demilitarization in Contemporary Japan*, London, Routledge, 1996.

domestic market (as evidenced by the case study of rice above); and second the increasing penetration of the US market by Japanese producers in industries such as textiles, steel, automobiles and electronics.

The one exception to this rule, however, was the oil industry where the majors continued to dominate both the supply of oil (in its crude and refined forms) to Japan and the domestic refining and distribution networks as well. The major reason for this was that in stark contrast to rice, which was no longer a key wage good by the 1960s, oil was in the process of becoming the very lifeblood of the economy.[85] The long history of foreign penetration and the interests of heavy oil users such as the steel and petrochemical industries ensured that infant industry protection was never an option in the case of oil.[86] Their case was strengthened in an international context where as an important junior partner in the US alliance, Japan gained access to as much cheap oil as it wanted, and this from more diverse sources as the oil majors – by this time the infamous 'Seven Sisters' – began to exploit the oil fields of the Middle East and North Africa.[87]

Despite this the government still faced something of a dilemma. Although a lack of foreign exchange demanded that Japan buy oil at the cheapest possible price, the traditional aversion to any form of dependence on foreign money and firms continued to niggle. In the context of the 1960 revision of the Security Treaty between the United States and Japan and the IMF-mandated relaxation of trade and foreign exchange restrictions of the same year, there was a genuine fear in the country that the economy was wide open to foreign domination, chiefly by US firms. This domination could only be aided and abetted by the close military and political ties between the two countries.[88] In these circumstances, both the government

[85] On the long and painful transition from coal to oil see Laura E. Hein, *Fueling Growth: The Energy Revolution and Economic Policy in Postwar Japan*, Cambridge, MA, Council on East Asian Studies, Harvard University Press, 1990, especially ch. 10.

[86] Samuels, *The Business of the Japanese State*, p. 217.

[87] The Seven Sisters were Exxon, British Petroleum, Royal Dutch–Shell, Gulf, Mobil, Standard Oil of California and Texaco.

[88] Hein, *Fueling Growth*, p. 321; Samuels, *The Business of the Japanese State*, pp. 196ff. The 1951 Security Treaty between the United States and Japan was superseded by the 1960 Treaty of Mutual Cooperation and Security between the United States and Japan.

and those businesses that had built up some expertise in the industry saw a long-term need for Japan to develop an independent processing capability.[89]

However, given the existing structure of the industry the only way forward was through joint ventures and by the early 1960s Japan found itself tied into a number of deals, involving loans tied to crude oil purchases, adding up to 80 per cent of its oil imports.[90] This severely curtailed Japan's ability to buy the cheapest oil, in a market that had grown more competitive as new entrants and new sources slowly began to erode the monopoly power of the majors.[91] Nevertheless, by 1962 the Ministry of International Trade and Industry (MITI), working in partnership with Japanese business and empowered by the second Petroleum Industry Law of 1962, had ensured that independent domestic refiners had captured almost 45 per cent of Japan's total refining capacity. Five years later MITI led the creation of the Petroleum Development Corporation whose brief it was to subsidize the overseas exploration activities of Japanese firms such as Mitsui, Mitsubishi and Sumitomo – thus, in theory, closing the loop between exploration, drilling, transportation, refining and sales.[92]

If by the early 1970s Japanese dependence on the USA for supply of this most precious commodity had begun to ease, nothing could have prepared it for the shock of the quadrupling of prices for crude oil that took place between October 1973 and January 1974 and the suspension of oil deliveries to nations friendly to Israel, including Japan. In Japan's case this led to an immediate reversal in its trade balance and in GDP growth, 'stagflation' (recession coupled with inflation) and a rise in unemployment levels as thousands of firms went to the wall.[93]

[89] This need had been driven home during the Second World War when the Sumatran oil fields and their related refineries could only be brought up to 60 and 40 per cent of their respective pre-war capacities using 70 per cent of the trained personnel available in Japan. Vernon, *Two Hungry Giants*, p. 91.

[90] Samuels, *The Business of the Japanese State*, ch, 5.

[91] Vernon, *Two Hungry Giants*, p. 93.

[92] Ibid., p. 96. This glosses over the difficulties MITI faced in overcoming the resistance of Japanese oil firms who simply did not want to be regulated by government and who were, at the same time, fearful of damaging their relations with the oil majors. Samuels, *The Business of the Japanese State*.

[93] It should be noted that the first oil shock did not end Japan's economic 'miracle'. It is generally understood that some combination of the devaluation of the

The Consequences of Continued Subordination and Dependence

In regard to the supply of oil it was a newly reorganized MITI that played the central bureaucratic role in Japan's immediate efforts to recover from the first oil shock. These efforts aimed, ultimately, to achieve oil security in terms of both price and supply. The Emergency Measures Law for the Stabilization of the People's Livelihood and the Petroleum Supply and Demand Normalization Law (both brought forward in December 1973) empowered MITI to demand from wholesalers and retailers reports on the state of their supplies, to set prices for designated commodities, to draw up plans for the supply of consumer products (such as toilet paper and detergents) and to fine violators.[94]

MITI did not prove particularly successful in constructing a new oil policy, surrounded as it was by charges of collusion between it and the Japanese oil companies and incompetence over at least one of the prestige projects it championed.[95] Nevertheless, draconian conservation measures coupled with technological advances served to cut domestic consumption, while oil diplomacy – involving substantial loans, official development assistance and technical assistance – began to pay dividends abroad.[96] With the power of the Seven Sisters now broken, Japan quickly signed a number of economic cooperation agreements (with Iran, Iraq, China and Saudi Arabia amongst others), whilst embarking on all-out efforts at diversification of energy supply. Indeed, the proportion of oil in Japan's overall energy supply had fallen from 73.4 per cent in 1975 to 56.3 per cent a decade later, while natural gas and atomic power featured for the first time – with gas supplying 9.4 per cent of energy requirements and atomic

dollar, the collapse of the Bretton Woods system of fixed exchange rates in 1971, a slowdown in the rate of technical progress, decreasing labour productivity, decreased capital formation and creeping inflation had eroded the dynamism of the Japanese economy even before the first oil shock.

[94] Johnson, *MITI and the Japanese Miracle*, pp. 297–8; Murakami, 'The Remarkable Adaptation of Japan's Economy'.

[95] Johnson, *MITI and the Japanese Miracle*, pp. 296–300; and Kazuo Takahashi 'The Iran–Japan Petrochemical Project: A Complex Issue', in Sugihara and Allen, *Japan in the Contemporary Middle East*, pp. 83–93.

[96] Sugihara and Allen, *Japan in the Contemporary Middle East*, chs 3, 6 and 7; and the various contributions to Stallings and Székely, *Japan, The United States, and Latin America*.

power 8.9 per cent. By 1996 atomic power was supplying 12.3 per cent of Japan's energy needs.[97]

In the intervening years these figures have shifted again as noted above but the fact remains that Japan is still heavily dependent on oil sourced predominantly from the Middle East. As a consequence Japan has been forced to engage with the region more actively and to continue to balance its relationship with the Arab states on the one hand, and with Israel on the other. In the context of the US–Japanese alliance and continued difficulties with the use of its military power this engagement has mainly taken the form of ODA, dispersed in varying proportions as a mixture of grants, loans, or technical assistance, depending on the circumstances prevailing in a given country.[98] It has also involved diplomacy aimed at conflict prevention and resolution (between Palestinians and Israelis and between Iran and Iraq, for example) and, when these fail, post-war reconstruction (Afghanistan, Iraq).

As was formerly the case in South-East Asia, however, these efforts are open to criticism since they have been seen as opportunistic. Japan's bilateral ODA to the Middle East stood at 0.8 per cent of its total disbursement in 1972 but had shot up to 24.5 per cent in 1977, before falling back into the 10 per cent range in the 1980s following the successful restructuring of the Japanese economy and the return of cheap oil.[99] During the Gulf Crisis of 1990–91, however, bilateral ODA again shot up reaching 20.4 per cent of the total before once again falling back into the 6–7 per cent range.[100]

To a certain extent this behaviour is not remarkable since, by and large, development assistance to any particular country waxes and wanes in proportion to its perceived economic, military and political importance to the donor country. Indeed, the USA was notoriously fickle in its own aid strategy during the Cold War. What is strikingly different in the Japanese case is the scrutiny it faces in regard to its ODA policy since this is the only substantial tool of foreign policy it has. Nowhere was this more obvious than in reactions (particularly

[97] Figures from Mitsuo Saito, *The Japanese Economy*, Singapore, World Scientific Publishing, 2000, p. 171, table 7.1.

[98] Japan's *Diplomatic Bluebook*, various years, available at www.mofa.go.jp.

[99] Ministry of Foreign Affairs (Japan), *Japan's Economic Cooperation in the Middle East*, available at www.mofa.go.jp.

[100] Ibid.

in the USA) to its contribution to the Gulf crisis of 1990–91. Although huge in financial terms ($13 billion), these were dismissed as inconsequential alongside the deaths of soldiers from a variety of coalition countries (principally the USA and Britain).[101] The Japanese foreign minister was not even invited to the victory celebrations.

As a consequence, Japan has slowly begun to take a more active military role further from its own shores. Up until recently this has taken place under the close supervision of the USA or under UN mandates.[102] However, on 25 July 2003 the Diet agreed a decision of the Koizumi government to despatch troops to Iraq in the absence of a UN mandate – making it the first time Japanese armed forces have acted independently abroad since 1945.[103] There is no doubt that this is a decision of momentous import since, arguably, it signals the final abandonment of the Yoshida Doctrine and the pacifism associated with Article 9 of the Japanese Constitution. Even the perception that this might be the case will have tremendous implications for how Japanese foreign policy is received, particularly in North-East Asia. Once again Japan's resource dependence is of major significance here since it relies so heavily on nuclear power, and it is to this that we now turn.

THE ATOM

Atomic power has a number of characteristics that make it a tempting prospect for a resource-poor country such as Japan, whilst simultaneously carrying a number of extreme risks. It is tempting primarily because it holds out the prospect of virtually unlimited power generation by the Japanese themselves, free from foreign interference, should a number of legal and technical difficulties be overcome. For the Japanese, who have favoured technical solutions to resource problems in the past, such as robotics, for example, this has been an opportunity they have seized upon with some relish. Any decrease in their reliance upon oil has been welcomed and encouraged. On the

[101] Karasawa Kei, 'Japan and Petroleum, the Most Critical Natural Resource', in Warren S. Hunsberger (ed.), *Japan's Quest: The Search for International Role, Recognition, and Respect*, Armonk, NY, M. E. Sharpe, 1997, pp. 59–76; Hook, *Militarization and Demilitarization in Contemporary Japan*, ch. 4.

[102] Kelly, *Japan and the Reconstruction of East Asia*, ch. 7.

[103] Jonathan Watts, 'End of an Era as Japan Enters Iraq', *Guardian*, 26 July, 2003, p. 15.

other hand atomic power is both costly and dangerous to produce. In peaceful domestic use it comes attached to a heavy price tag that incorporates both financial and social costs. At the heart of the matter, however, is the dual nature of atomic power – as a weapon of war as well as an instrument of peace.

As noted above, as of August 2004 nuclear power was meeting 13.7 per cent of Japan's total energy needs and supplying 28 per cent of its electricity. This was being delivered by 51 reactors with an installed capacity of 45 gigawatts.[104] In March 2002 the Japanese government approved a 10-year energy plan that included calls for an increase in nuclear power generation by about 30 per cent by 2011. This would require the construction of between 9 and 12 new nuclear plants. In June of the same year the Energy Policy Law was passed establishing basic principles of energy security and stable supply and giving the government greater authority to promote market liberalization, efficiency in energy consumption and a reduction in fossil fuel use. These moves, coupled with a carbon tax announced in November 2002, signalled much greater reliance on nuclear energy for Japan in the coming decades in accordance with perceived energy security needs and the environmental goals embedded within the Kyoto Protocol.

In addition, for many years Japan has been pursuing the dream of completing the nuclear fuel cycle, which entails the reprocessing and enriching of spent fuel and its use in fast breeder reactors (FBRs) which produce more plutonium in their spent fuel than they consume.[105] This would, in theory, release Japan from its reliance on imported uranium and, again in theory, radically simplify Japan's resource diplomacy. Pursuit of this goal has been a slow and hesitant process dependent on a number of factors including the cost of uranium ore and technical difficulties associated with the process. The original intention was to use a highly toxic plutonium-uranium mixed oxide (MOX) fuel in a new type of FBR. However, these plans had been conceived in an era when the supply of uranium was predicted to fall sharply, given the Cold War conflict between the USA

[104] Energy Information Administration, US Department of Energy, www.eia.doe.gov/emeu/cabs/japan.html.

[105] Jeffrey W. Thompson and Benjamin L. Self, 'Nuclear Energy, Space Launch Vehicles, and Advanced Technology: Japan's Prospects for Nuclear Breakout', in Thompson and Self, *Japan's Nuclear Option*, p. 150.

and USSR and high predicted uptake of nuclear power across the globe. In fact, the supply of uranium has remained stable, and the price correspondingly low, whilst at the same time a major sodium leak at the Monju prototype FBR in December 1995 led to its shutdown after only 20 months of operation. Attention has since turned to the use of MOX fuel in light water reactors (LWRs), an altogether second-best solution, but this too has been affected by local concerns regarding safety.

Finally, the reprocessing of spent fuel has proven immensely more difficult and costly than at first assumed. The primary reprocessing and enrichment plant, located at Rokkasho-mura (Rokkasho village) in Aomori Prefecture, is scheduled to begin operations in 2005 but has yet to be completed. It has been delayed by a series of factors ranging from safety fears and claims that the plutonium produced could be used in a Japanese nuclear weapons programme, to controversies surrounding the true cost and feasibility of the project, the wilful concealment of the extent of those costs, and the physical capacity of plant to reprocess the very large stockpile of spent fuel already accumulated in Japan, France and the United Kingdom.

The Contours of Atomic Diplomacy

The dual nature of atomic power means that in a number of ways the problems faced by Japanese officials in the conduct of nuclear diplomacy are similar to those faced in both rice and oil diplomacy. This makes nuclear diplomacy doubly complex.

On the one hand, the use of atomic power in Japan is – like the protection of Japan's rice market – a highly emotive issue, playing as it does into the memory of the atomic bombing of Hiroshima and Nagasaki in 1945. Its use, even for peaceful domestic purposes of central importance to the successful promotion of economic growth is, as a consequence, an extremely sensitive political issue. Japan's nuclear programme directly impinges upon the image the Japanese have of themselves and that they wish to portray to others. 'Pacifism' in Japan is a difficult concept to pin down, based as it is on US military guarantees.[106] Nevertheless, such is the depth of feeling on behalf of some sections of Japanese society that their country should

[106] Hook, *Militarization and Demilitarization in Contemporary Japan.*

remain a pacifist state that it has become almost an article of faith with them that Japanese wartime aggression was an aberration (brought about by an evil cabal of industrialists working hand-in-hand with the military and the bureaucracy), and that the true nature of the Japanese is inward-looking and peaceful. True or not, this image provides a strong foundation of anti-nuclearism in Japan. True or not, it is partly underpinned by cultural arguments drawn from a particular reading of Japanese history, as is the case for the continued protection of Japan's rice market.

On the other hand, like the production and refining of oil the generation of atomic power is a highly complex, highly technical process that is integrated on a global basis. It requires very large amounts of capital and expertise in addition to a fuel source, uranium, that Japan has to import due to its negligible domestic endowments. In Japan the costs of nuclear development, which include a social cost, have been met by a combination of government and private finance in accordance with state-led economic development. Under a legal blanket provided by the Atomic Energy Basic Law, and the Law for the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors amongst others, these costs have been minimized by the creation of a tight web of government regulation overseen by a complex institutional framework made up of a combination of private and public oversight. This oversight extends to the international sphere through Japan's membership of the International Atomic Energy Agency (IAEA) and compliance with its rules and procedures, as well as ratification of the Treaty on the Non-proliferation of Nuclear Weapons (NPT).

In other words, Japanese resource diplomacy in the realm of nuclear power has both a technical and cultural component and is pursued at multiple levels – domestic, regional and global. Moreover, as is the case with both rice and oil the successful conduct of Japan's nuclear diplomacy is profoundly constrained by, and mediated through, its alliance with the United States.

'Atoms for Peace' and the Origins of the Japanese Nuclear Programme

The origins of Japan's nuclear programme lie within the wider context of the Cold War, and specifically within the series of negoti-

ations between the USA and the USSR surrounding the creation of a nuclear control regime acceptable to them both. These negotiations, which were both long and acrimonious, were brought to a head following the first successful atomic test by the Soviets in 1949. The prospect of a nuclear arms race with the USSR provoked a vigorous debate within the USA that was to result in President Eisenhower's famous 'Atoms for Peace' speech to the UN General Assembly on 8 December 1953. Just under four years later an international organization, the IAEA, came into being with a somewhat more limited goal than that envisaged in Eisenhower's speech (the distribution of fissile material donated by nuclear weapons states for peaceful purposes in non-nuclear states). Rather, the new organization was to assist member states' development of nuclear technology, establish health and safety standards, promote the international exchange of information and serve as a forum for negotiation of international atomic safeguards.[107]

Japan's role in the early years of these negotiations was non-existent given its status as a defeated Axis power and the loss of its sovereignty until 1952. Indeed, the US forces of occupation had banned all nuclear research and destroyed the means by which this might be carried out. However, the exigencies of the Cold War had begun to alter Japan's circumstances by early 1948, as the USA turned away from a focus on China as a bulwark against Soviet ambitions in the Far East, towards a focus on the reconstruction of Japan and its reconstitution as a major ally in the global struggle against communism.[108]

Within this new context nuclear research began in Japan while the country was still under occupation by US forces, following a November 1949 decision by the US Atomic Energy Commission (AEC) to allow Japan to purchase radio isotopes for research purposes.[109] By 1954 officials of the AEC were openly calling for the USA to build a nuclear reactor in Japan as proof of Washington's commitment to the Atoms for Peace proposal. This was warmly received in certain

[107] Benjamin N. Schiff, *International Nuclear Technology Transfer: Dilemmas of Dissemination and Control*, London and Canberra, Rowman and Allanheld/Croom Helm, 1984, ch. 2.

[108] Kelly, *Japan and the Reconstruction of East Asia*, ch. 3.

[109] Hein, *Fueling Growth*, pp. 281ff.

quarters in Japan which had been touched by a 'full-scale nuclear fever' following the Atoms for Peace speech.[110] By May 1955 private US contractors were touting their wares in Japan at the same time that the US government was offering the Japanese access to enriched uranium and extending invitations to Japanese experts to study nuclear technology in the United States.

These overtures culminated in November 1955 with the United States–Japanese Atomic Energy Agreement which provided the legal framework allowing for the purchase by Japan of nuclear material and technology from the USA and its use for peaceful purposes.[111] One significant outcome of this agreement, and the revisions that followed it in 1968 and 1988, is that the USA retains sovereign rights over all the nuclear material used in Japan.[112] In other words, in a legal sense Japan's nuclear future is not one of its own making. The US government can, at any time, pull the plug on the Japanese nuclear programme by demanding the return of any and all nuclear materials produced from the original materials supplied by the USA. It can also demand the cessation of all transportation, reprocessing and enrichment of nuclear materials held within Japan and stored in European facilities. Given US opposition to the reprocessing of nuclear material and the cancellation of its own FBR project following cost and proliferation studies it is no wonder that the Japanese nuclear industry has been so nervous in recent years.[113]

Moreover, Japanese firms were from the outset tied into relationships (built partly on pre-war links) with their US counterparts for the supply of technology and equipment, and this despite several attempts to develop alternative sources of supply from Britain and, later, Canada. Thus, by 1956 of the five major Japanese nuclear groups two were linked with General Electric (Hitachi and Mitsui/Toshiba), one with Westinghouse (Mitsubishi), and one with United Nuclear (Sumitomo). Only Daiichi/Fuyo had travelled

[110] Samuels, *The Business of the Japanese State*, p. 234.

[111] Hein, *Fueling Growth*, p. 282.

[112] Thompson and Self, 'Nuclear Energy, Space Launch Vehicles, and Advanced Technology', p. 154. I am grateful to Benjamin Self for clarifying this point for me in a personal communication.

[113] Katsuhisa Furukawa, 'Nuclear Option, Arms Control, and Extended Deterrence: In Search of a New Framework for Japan's Nuclear Policy', in Thompson and Self, *Japan's Nuclear Option*, p. 108.

another route by opting to buy a Magnox reactor from Britain. This turned out to be a costly mistake, and confirmed the majority decision to develop US-designed LWRs.[114] Japanese firms continue to work with their US counterparts and have begun to export reactor designs and technology back to the USA, as well as supplying to a burgeoning East Asian market a complete range of services including project management.[115]

Public Diplomacy, Nuclear Power and the US–Japanese Alliance

Despite the 'full-scale nuclear fever' that accompanied Eisenhower's 1953 speech, selling nuclear power in Japan has not been easy. While the government, bureaucracy and big business jumped eagerly upon the nuclear bandwagon and found kindred spirits in sections of both the media and academe, the opposition parties were firmly against and had supporters of their own in media boardrooms and university halls. Moreover, as early as 1949 a domestic peace movement had found institutional expression in the country, despite the heavy censorship surrounding the after-effects of the two atomic bombings.[116] Nevertheless, a broad distinction has to be made between widespread rejection of nuclear weapons and widespread support for the peaceful use of nuclear power.[117]

Support for the peace movement was bolstered in 1954 following the revelation that a Japanese fishing vessel, the *Lucky Dragon No. 5*, had been caught in the blast of the first US hydrogen bomb test at Bikini Atoll in the Marshall Islands on March 1. The death of the radio operator and the contamination of the entire crew of 23 (as well as a large quantity of fish that ended up in Japanese markets)

[114] Samuels, *The Business of the Japanese State*, pp. 238, 240, 248–50.

[115] The Uranium Information Centre (at www.uic.com), a privately owned advocate of nuclear power, is a good source of rose-tinted information on all aspects of the nuclear industry. The same can be said of the World Nuclear Association (at www.world-nuclear.org), which has close links to the UIC. Counterpoint to their perspective may be found, amongst many others, at the Nuclear Control Institute (www.nci.org).

[116] Hook, *Militarization and Demilitarization in Contemporary Japan*, chs 2 and 7.

[117] Nobumasa Akiyama, 'The Socio-Political Roots of Japan's Non-Nuclear Posture', in Thompson and Self, *Japan's Nuclear Option*, pp. 64–91.

prompted a massive anti-nuclear campaign, led by a group of Tokyo housewives, that collected 18 million signatures in a matter of months. The national campaign started in the wake of this local protest gathered a total of about 32 million signatures, roughly half the voting population. A number of local authorities responded by calling for a ban on the use of all nuclear weapons, and this was shortly thereafter echoed in both houses of the Diet.[118]

This level of concern has been maintained in the intervening years by a host of specific incidents related to the wider prosecution of the Cold War and Japan's role in it as a junior partner of the USA. These include the revision of the Security Treaty in 1960, Japanese involvement in the Korean and Vietnam wars, and the intensification of the Cold War in the 1980s. The level of concern has been maintained in the post-Cold War era by Japan's relationship with Russia, with whom it has still not come to terms over sovereign possession of the Kuriles/Northern Territories, the China–Taiwan confrontation and associated military build up, the development of nuclear technology on both sides of the demilitarized zone on the Korean peninsula, the 1998 revision of the Guidelines for Japan–USA Defence Cooperation originally drawn up in 1978,[119] Japan's participation in the US-led 'war against terror' and its despatch of troops to Iraq in the aftermath of Saddam's overthrow.

These concerns have occasioned an ongoing defence of Japan's nuclear programme, and its participation in the US alliance, conducted by those supportive of their mutual continuation as outlined earlier. At an official level this defence includes Japan's reliance on US extended deterrence, reference to Article 9 of the Constitution, the Atomic Energy Basic Law,[120] and the USA–Japan Atomic Energy Agreement, which is both older and stricter than the NPT and binds Japan very tightly into a commitment to the solely peaceful use of nuclear technology and materials. It further includes membership of

[118] Hook, *Militarization and Demilitarization in Contemporary Japan*, pp. 171–2; Akiyama, 'The Socio-Political Roots of Japan's Non-Nuclear Posture', pp. 72–6.

[119] The revised guidelines suggest that Japanese forces may have to enforce regional blockades (such as in the Taiwan Straits, perhaps), take part in minesweeping operations, and provide greater logistical support to US forces in Japan.

[120] Article 2 of the Atomic Energy Basic Law states: 'The research, development and utilization of atomic energy shall be limited to peaceful purposes, aimed at ensuring safety and performed independently under democratic management'.

the IAEA (including the 1999 ratification of the Additional Protocol which allows for more intrusive inspections) as noted above. Finally, it makes much of Japan's adherence to the three non-nuclear principles – never to possess, produce or introduce nuclear weapons into Japan – established in December 1967 by the Sato government.[121]

Legal and political commitments not to become a nuclear weapon's state have been joined by a series of efforts by the Japanese government to collaborate on disarmament and strengthen the non-proliferation regime. Recent examples include, amongst others, the hosting in Tokyo of a summit on wider adherence to strengthened safeguards on behalf of the IAEA, further steps towards completion of the dismantlement of nuclear-powered submarines belonging to the Russian fleet in the Far East and the safe removal and disposal of their nuclear material, and strong calls for the commencement of negotiations on the Fissile Material Cut-Off treaty.[122] In addition, there have been a number of initiatives and achievements in the reduction of small arms and light weapons, and in the destruction of stockpiles of anti-personnel landmines.[123]

Finally, Japan quite rightly points to its participation in the negotiations surrounding the development of a nuclear weapons' programme in the Democratic People's Republic of Korea (henceforth, North Korea) as evidence that it is doing all it can to promote the peaceful use of nuclear power and to eradicate the possibility of its use as a weapon of mass destruction. These negotiations have been propped up by large amounts of Japanese (food) aid to North Korea, the basing of US troops on Japanese soil and funding for the Korean Energy Development Organization, the aim of which is to provide North Korea with LWRs incapable of producing weapon-grade plutonium in exchange for Pyongyang's adherence to the NPT.[124]

[121] For a discussion that casts doubt on Japan's adherence to these principles from the very beginning see Hook, *Militarization and Demilitarization in Contemporary Japan*, pp. 64–8.

[122] Mitsuru Kurosawa, 'Curbing Nuclear Proliferation: Japanese, G8, and Global Approaches', in John J. Kirton and Junichi Takase (eds), *New Directions in Global Political Governance: The G8 and International Order in the Twenty-First Century*, Aldershot, Ashgate, 2002, pp. 117–40.

[123] Details at the website of the Ministry of Foreign Affairs (Japan), at www.mofa.gov.jp.

[124] Mark E. Manyin, *Japan–North Korea Relations: Selected Issues*, Congressional Research Service, Library of Congress, 26 November 2003.

However, the negotiations have been hampered by a whole host of factors ranging from popular concern in Japan regarding the safe return of Japanese nationals kidnapped by North Korean agents, the launch of North Korean rockets over Japanese territory in the late 1990s, fears of guerrilla strikes against Japan's own nuclear installations and the discovery in 2004 that South Korea had also undertaken nuclear weapons research. This has meant not only that Japan has at times moved at a different pace from its South Korean and US allies on normalization of relations with Pyongyang, but also that it has been drawn closer towards a more active military role of its own.[125] This military role is signalled by participation in theatre and ballistic missile defence cooperation with the USA, the launching of Japanese spy satellites and the passage of legislation allowing the Japanese coast guard to fire upon suspected North Korean 'spy ships'.[126] When added to the dynamics associated with Japan's oil diplomacy the domestic 'push' and international 'pull' factors for Japan to become a 'normal' military power appear very strong indeed.[127]

These developments naturally play into arguments suggestive of the fact that Japan may be preparing to become a fully fledged nuclear power. As Calder put it several years ago, if Japanese imports of plutonium from Britain and France are added to domestic production, it is estimated that Japan will have a stockpile of about 100 tons of plutonium by 2010, 'which is more than the amount currently contained in all the nuclear warheads of both the United States and former Soviet Union'.[128] Even earlier a senior US official had suggested that: 'If it was any other country than Japan, we would look at this plutonium project [Rokkasho-mura] and conclude a bomb was the real motive. But the fact is that it's OK for the Japanese because we trust them, and it's not OK for North Korea because we don't trust them.'[129]

[125] Christopher W. Hughes, 'Japan–North Korea Relations From the North–South Summit to the Koizumi–Kim Summit', *Asia-Pacific Review*, 9: 2 (2002), pp. 61–78; Smith, 'Japan's Future Strategic Options and the US–Japan Alliance'.

[126] Ken Jimbo, 'Rethinking Japanese Security: New Concepts in Deterrence and Defense', in Thompson and Self, *Japan's Nuclear Option*, pp. 24–45.

[127] Christopher W. Hughes, *Japan's Emergence as a 'Normal' Military Power?*, Oxford, Oxford University Press, 2004.

[128] Kent E. Calder, *Asia's Deadly Triangle: How Arms Energy and Growth Threaten to Destabilize Asia Pacific*, London, Nicholas Brealey, 1996, p. 68.

[129] Cited in Robert Harvey, *The Undefeated: The Rise, Fall and Rise of Greater Japan*, London, Macmillan, 1994, p. 581.

Given an upswing in inflammatory remarks made by senior Japanese officials and other opinion leaders concerning Japan's possible emergence as a nuclear weapons state from 2002 onwards the two statements above appear prescient. These remarks, and the public debate that emerged in reaction to them, have been affected by a slew of comments in the USA concerning Japan's possible nuclear breakout. These comments surely include some genuine concern for the implications of a Japanese 'breakout', but a more cynical interpretation might point to the playing of a 'Japan card' in the context of negotiations regarding North Korea's nuclear weapon's programme. Publicly voiced concerns by US officials and commentators about Japan's nuclear future may serve to push China to force North Korea into concessions on its nuclear programme. On the other hand, such statements raise the political temperature in the region and may serve as a 'green light' for those in Japan already inclined to pursue the nuclear option.[130]

Public Diplomacy and the Governance of Nuclear Power in Japan

The uncertainty surrounding Japan's possible future as a nuclear weapons state throws into stark relief the absolute necessity for continued tight control over the nuclear material held in Japan, in other states on Japan's behalf and in transit between them. As a series of incidents relating to safety at Japan's nuclear facilities attests, however, there is a black cloud hanging over the ability of the government to meet its responsibilities in this area. This is matched by uncertainty over the safety of materials held in other countries and in transit. There has been, in fact, a lack of planning, coordination and oversight in the regulation of the industry almost from the outset.

Arguably, these various flaws in the system of governance have emerged as a consequence of the bitter struggle for control over the industry that took place within and between the private sector and the government bureaucracy from the 1950s to the 1970s, the effects of which are still being worked out today.[131] The main characteristic

[130] Furukawa, 'Nuclear Option, Arms Control, and Extended Deterrence', pp. 95–147.

[131] Discussed in detail in Samuels, *The Business of the Japanese State*, ch. 6.

of this struggle was a determination by industry to maximize commercial gains whilst at the same time minimizing the risks involved. What industry wanted, and what it eventually got, was the socialization of the risks associated with the development of a nuclear industry. A major consequence of this was the domestic development of an unwieldy system of regulation and oversight, split between public and private agencies and authorities, that was inefficient, lacking in vision and wide open to corruption.

Thus, under a wide umbrella provided by the Japanese Atomic Energy Commission established in 1955 as an administrative body in the office of the prime minister, it was industry that bore the responsibility for building and running Japan's commercial reactors. On the other hand it was the government that underwrote the costs of ensuring adequate stable supplies of uranium ore, developing experimental reactors, providing indemnity against accidents, channelling side payments to local communities 'blighted' by proximity to nuclear sites, and the safe disposal of nuclear waste. It was the government, moreover, that took on the projects started during the period of 'nuclear fever' but which soon proved to be either commercially unviable or technically unfeasible (and usually both). This socialization of risk is one reason why the nuclear safety regime in Japan is so underdeveloped, and one reason why Japan is one of the few countries in the world – alongside India and Russia – still pursuing the dream of FBR technology and its associated reprocessing of spent nuclear fuel.

As a consequence there are several questions hanging over Japan's extravagant plans to pursue FBR technology requiring MOX fuels reprocessed from spent nuclear fuel. The first concerns the choice of this route in the first place given the low cost and relative abundance of uranium ores, the majority of which can be and are supplied by democratic states such as Australia and Canada. Hindsight is a wonderful thing but Japan has had plenty of time to build up a strategic reserve of uranium ore sufficient to meet its fuel needs in conventional LWRs for many years to come. In this context it appears odd that plans for the major reprocessing, enrichment and waste disposal facility at Rokkasho-mura were put forward as late as 1984. The second question concerns the cost of reprocessing which is far higher than that associated with the single use of nuclear fuels. Indeed, so high have been these costs that a MITI study undertaken in 1994 was buried, only to come to light amidst a great deal of scandal in July

2004. The study suggested that reprocessing would cost twice as much as simply burying spent fuel at a disposal site.[132]

The third question concerns the costs of production and disposal of MOX fuels which, contrary to some claims by the nuclear industry, are not a panacea.[133] According to one study MOX fuels are at least ten times as expensive to produce as conventional nuclear fuels and require far more elaborate safety mechanisms due to their highly toxic nature. Moreover, reprocessing spent nuclear fuel into MOX fuel creates a great deal of waste that has to be disposed of in the conventional manner, and since all the plutonium is not 'burnt' in MOX reactors the ensuing waste must also be disposed of. Thus, far from reducing the need for storage facilities MOX fuel generates in the order of ten times the volume of waste that is produced by conventional LWRs.[134]

The fourth question concerns the shipping of radioactive waste from Japan to Europe and the reprocessing and transport of MOX fuel (and associated waste) back to Japan from facilities mainly in France and Britain. Several hundred tons of spent fuel have been shipped from Japan to Europe since the 1970s. Reprocessed fuel and waste have been sent back to Japan since the mid-1980s. However, in 1999 British Nuclear Fuels Limited was forced to re-import from Japan a shipment of MOX fuel pellets after it was found that staff had falsified quality control data.[135] This specific incident, and others, fed into broader fears concerning the transportation across vast distances of highly dangerous nuclear materials.

In this regard a range of countries – from South America to the south-west Pacific – that sit astride the three routes used to transfer material between Europe and Japan have complained that there is neither enough information provided about the shipments nor a robust set of procedures in place designed to respond adequately to an emergency such as a lost cargo or the sinking of a ship within

[132] Kenji Hall, 'Scandal Surfaces as Japan Reconsiders Long-term Nuclear Program', *Associated Press*, 6 July 2004.

[133] See, for example, Uranium Information Centre Nuclear Issues Briefing Paper 42, 'Mixed Oxide Fuel (MOX)', available at www.uic.com.

[134] Paul Leventhal and Steven Dolley, 'Understanding Japan's Nuclear Transports: The Plutonium Context', Washington, DC, Nuclear Control Institute, 1999.

[135] A full report can be found on the UK Health and Safety Executive website at www.hse.gov.uk.

sovereign or international waters. A further complaint relates to the protection of these shipments from hijackers seeking to steal the cargo or simply blow up the ships in strategic choke points such as the Panama Canal or Straits of Malacca. The absence of military escorts and the use of private contractors closely associated with the nuclear industries in France, Britain and Japan in the provision of physical security for the shipments is also cause for concern.[136] These concerns have been amplified by the fact that MOX fuels can be used as nuclear weapons. To do so is a difficult and dangerous process but it can be done by a small team of people with reasonably good knowledge of the technology and processes, and in only a few weeks. This effectively closes the loop between the civilian and military aspects of Japan's public diplomacy concerning nuclear power.

The black cloud hanging over Japan's development of technology and processes associated with its FBR programme has been darkened still further by a series of accidents at Japanese nuclear facilities that are too numerous to document in full here. The 2–3-ton radioactive sodium leak at the Monju reactor was noted earlier but not the persistent attempts by the government corporation concerned to cover up the incident and to prevent the publication of video evidence documenting the leak. Failure to prevent this accident, and to deal adequately with the aftermath, led to the dismantlement of the state-run Power Reactor and Nuclear Fuel Development Corporation (PNC), which had been established in 1967 to oversee the development of new reactor technology including FBRs.[137]

Despite efforts to strengthen and streamline the safety regime in the intervening years Japan has been rocked again and again by the exposure of corporate mismanagement and criminality in the nuclear industry, and by the failure of the government and bureaucracy to identify and deal with such incidents in a swift and timely manner. Such incidents include the accident at the JCO Company, a

[136] Contrasting views on this issue can be found in Leventhal and Dolley, 'Understanding Japan's Nuclear Transports', and in a document published by COGEMA (the French company responsible for reprocessing the majority of Japanese spent nuclear fuel and waste) entitled 'Transport of MOX Fuel from France to Japan', available at www.cogema.fr.

[137] Samuels, *The Business of the Japanese State*, p. 242; Leventhal and Dolley, 'Understanding Japan's Nuclear Transports'. Although state-run, the PNC was jointly funded by the public and private sectors.

subsidiary of the Sumitomo Metal Mining Company, located in Tokai-mura on Japan's Pacific coast about 120 kilometres north of Tokyo.[138] Caused by an illegal but company-sanctioned procedure designed to speed up production and therefore cut costs, on 30 September 1999 two ill-trained, over-worked and unprotected workers caused an incident of criticality (a self-sustaining nuclear reaction) by pouring a mixture of uranium oxide powder, nitric acid and water from a series of stainless steel buckets into an unsuitable, unshielded precipitation tank situated in a room that was also unshielded and which lacked appropriate radiation detection monitors. The subsequent radiation leak, since rated 5 on the International Nuclear Event Scale (the same as the accident at Three-Mile Island), caused the deaths of the two workers and the exposure of at least 439 local people (and probably many more) to higher than normal levels of radiation during the 24-hour event.[139]

Despite the more recent accident at the Mihama Plant of the Kansai Electric Power Company on 9 August 2004, which was caused by the failure of a corroded coolant pipe that had not been properly inspected since 1976, and which resulted in the deaths of four people and the injury of seven others, the Tokai-mura accident remains the worst in Japanese history.[140] Nevertheless, this latest accident and the revelation in 2002 that the Tokyo Electric Power Company (TEPCO) had systematically covered up data revealing cracks in the protective shrouds around its 17 reactors has served to re-ignite a national debate over the long-term future of Japan's nuclear industry. In the short term the temporary shutdown of TEPCO's reactors caused a surge in Japan's oil imports and a slowdown in its economic recovery. In the longer term these accidents and the scandals that attend them may seriously undermine the future of Japan's nuclear

[138] Michael W. Donnelly, 'Nuclear Safety and Criticality at Tokaimura: A Failure of Governance', in Kirton and Takase (eds), *New Directions in Global Political Governance*, pp. 141–87.

[139] Ibid., and Michael W. Donnelly, 'Nuclear Blight in Japan: Criticality at Tokaimura', in Masao Nakamura (ed.), *Japan in the Global Age: Cultural, Historical and Political Issues on Asia, Environment, Households and International Communication*, British Columbia, Centre for Japanese Research/University of British Columbia, 2001, pp. 83–92.

[140] On the Mihama incident see 'Bursting Point', *Economist*, 14–20 August 2004, pp. 52–3.

programme, which would scupper its environmental goals. They have already caused a rethink of Japan's FBR dreams. If the FBR programme is cancelled Japan may be left sitting on enough (potentially) weapons grade plutonium to destroy all life on this planet many times over.

CONCLUSIONS

Constructing an analysis around three key resources rather than one requires embarkation on a challenging but ultimately rewarding odyssey. Individually the discussions illuminate key issues in and problems with both the theory and practice of international relations, such as the difficulty of integrating discussions of culture into the mainstream debate. Is it, as one analyst puts it, 'kosher' to talk about culture or should we see its deployment as a political device meant to preserve an existing status quo?[141] Is culture a determining factor in the protection of Japan's rice market or is it simply a matter of political expediency? How do we measure the merits of one culture against another? How do we identify what makes a culture unique and/or distinct? How can existing institutions of governance be made more sensitive to more cultural differences and, indeed, should they reflect these differences? Who is to decide these questions?

Similarly, the psychological effects and subsequent political outcomes of maintaining a nuclear capability within the context of Japanese suffering and the suffering of others during the Second World War are a feature of the international relations of resource diplomacy. So too is the thorny problem of disposing of waste products that will remain hazardous for thousands of years. Japan's possession of nuclear technology thus has a domestic component in the form of a 'nuclear allergy' that has made the politics of nuclear power an often uncomfortable and sometimes extremely painful experience for the government; while at the same time the fear of a resurgent Japanese militarism is never far from the minds of its near neighbours.

[141] Peter Temin, 'Is it Kosher to Talk about Culture?', *Journal of Economic History*, 57: 2 (1997), pp. 267–87.

On the other hand there are technical and other complexities associated with the production of oil and atomic power (and, increasingly, with agriculture) that raise questions as to ownership, control and sovereignty that pre-date the globalization debate by many years. It is quite clear that the Japanese government and Japanese firms have never enjoyed the freedom to control the oil and nuclear industries to the extent that they have in many other industries and sectors vital to economic performance and growth. Rather, this control has largely been in the hands of the US government and US firms. In addition to raising serious questions about the received wisdom concerning the corrosive effects of globalization, this throws into question the very conception of Japan as a developmental state. Narrow private interests have triumphed over national interests in the formulation of Japanese resource policy and its associated diplomacy more frequently than is often recognized. Moreover, the dominant image of Japanese policy-making as an outcome of the machinations of faceless bureaucrats, politicians and businessmen has to be questioned in light of evidence, from the case study on rice for example, that not only are the boundaries between these groups not fixed but that each group has been selectively and actively colonizing areas of authority traditionally associated with the others. Not only that but the connections are far wider, extending deep into local politics and vice versa.

Cumulatively the discussions show how one issue impacts another, such as the forced adoption of a nuclear programme following the oil crisis of the 1970s and the far greater dependence on oil from the Middle East that would follow abandonment of this programme, although such an abandonment is almost beyond the realms of possibility at this juncture. Closely related to this, the very real importance of time is another theme that comes out rather forcefully. Telling the 'stories' of rice, oil and the atom provides a powerful reminder not only of their overlapping and intertwined histories but also of the tendency for political reaction to lag significantly behind practical necessity. Moreover, taken to extremes a focus on time highlights the fact that Japan's closed rice market is a product not just of post-war necessity (feeding a malnourished, impoverished population) but of a culture and political economy built around rice that has its beginnings several thousand years ago. Paired with the example of nuclear waste disposal given above we thus have to look forward as well as backwards in time in order to understand fully the

contours of resource diplomacy. These contours can and sometimes must change overnight, or remain literally fixed for geological ages.

Finally, and most importantly, the three case studies presented above reveal the absolute dependence of Japan's successful pursuit of resource diplomacy upon its wider relationship with the United States. It is US foreign policy, driven by interest-group pressure and wider international and strategic concerns and its own state strategy that has shaped almost every aspect of Japanese policy in regard to rice, oil and atomic power and, of course, in regard to practically every other aspect of policy and politics. There is little or no prospect of this changing for the foreseeable future.

If this is indeed the case, what can we conclude regarding Japan's portrayal as a reactive state and the analytical merit of the general formulation of a concept of 'reactivity'? In one sense, of course, the foreign policies of all states are reactive to a greater or lesser extent depending on their respective sensitivity or vulnerability to pressures, constraints and/or opportunities emanating or emerging from Calder's overlapping areas – state strategy, the character of the international system, and the internal structure of the state – and the relative sensitivity to pressure within and between each of these.[142] In this even the USA is no different to any other state. It is also the case that a state may exhibit more 'reactivity' in some areas of foreign policy than others, and this is certainly the case in Japan where its resource diplomacy has remained significantly more reactive than its aid policy for example.[143]

It is also evident, however, that there are differences in the source, extent and nature of Japan's reactivity, depending on which resource is singled out. Japan has, for example, more or less successfully resisted US pressures aimed at securing the liberalization of its rice market because of the domestic coalition of forces that has gathered around this issue for cultural, economic and electoral reasons. Despite its economic significance it has been less successful in pursuing its oil policy due to the lack of bureaucratic control over the domestic industry, which is itself a product of the global dominance of the oil business by US firms and the US government, and its sub-

[142] Reminiscent, of course, of arguments put forward in Robert O. Keohane and Joseph S. Nye, Jr, *Power and Interdependence: World Politics in Transition*, Boston, Little, Brown, 1977.

[143] Yasutomo, *The New Multilateralism in Japan's Foreign Policy*.

ordinate position within a US alliance that has demanded support for Israel against all logic of Japan's strategic position vis-à-vis its resource dependence.

What this suggests for the wider argument is the old chestnut that theoretical models of any sort simply cannot stand up in the face of political reality. In regard to its resource diplomacy Japan may well not have undertaken many major independent foreign (economic) policy initiatives when it has had the power and national incentives to do so. It has, however, done its best within the limits imposed upon it, as for example with its efforts to curry favour with the Arab states and its (largely) proactive stance in encouraging non-proliferation in general and a nuclear-free Korean peninsula in particular. Similarly, it has demonstrated both responsiveness and resistance to outside pressure for change depending on the issue at hand. This suggests the possibility of degrees of reactivity.[144] Questions remaining are whether and to what extent one area (state strategy, for example) is more important than others in a particular context, the dependence of the model on the centrality of the USA as hegemon, how time-bound it is within the period of US hegemony, and the necessity for including within its remit the possibility that 'cultural' arguments do have some basis in reality and play a genuine role in politics and in resource diplomacy.

[144] Ibid., ch. 6.