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PLANNING FOR EMPIRE

REFORM BUREAUCRATS
AND THE JAPANESE
WARTIME STATE



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JAPAN'S WARTIME TECHNOCRATS

In his theory of what he termed the “managerial revolution,” James Burnham proclaimed that capitalism was coming to an end. What was emerging in its place was not socialism but a new type of “managerial” society.

What is occurring in this transition is a drive for social dominance, for power and privilege, for the position of ruling class, by the social group or class of the *managers*.... This drive, moreover, is world-wide in extent, already well advanced in all nations, though at different levels of development in different nations.¹

Burnham, a former adherent of Trotskyism, rejected Marx’s theory of class struggle, by which capitalists would be overthrown by workers. Contrary to the Marxist historical view, he argued, the capitalist class was being replaced, not by the proletariat, but by a new quasi-class of “managers.” These managers did not own the means of production but controlled them through their posts within the state bureaucracy. Moreover, under their leadership, societies were becoming increasingly totalitarian. Burnham believed that the Soviet Union and Nazi Germany had advanced the farthest along this route, while New Deal America was beginning to reveal similar tendencies.

Burnham articulated a vision of the modern world that was shared by many technocrats and their theorists in the advanced industrial countries. Japanese

1. James Burnham, *The Managerial Revolution: What is Happening in the World* (Bloomington, IN: Greenwood Press, 1941), 71–72.

technocrats, like their counterparts in the West, perceived their country to be part of the global trend of technocratic modernity. Its institutional symbols—Nazism, Stalinism, and New Dealism—suggested that the developmental paths of industrial countries were converging toward centrally planned, professionally administered mass societies. According to this view, the application of the principles of the machine to industry and government was bringing about the increased organization of work and “technicization” of society. *Laissez-faire* capitalism, in which individual capitalists maximize profits in response to market supply and demand, was being replaced by organized capitalism, which was technology-driven, hierarchical, and centered on the large organization. Eventually, they believed, capitalist society would give way to a new form of managerial society in which the ownership and control of capital were separate and political power was transferred to a new professional class of technologically oriented managers, or technocrats.

Burnham's theory provides insights into understanding the links between technology, the formation of Japan's managerial elite, and fascism in wartime Japan. His prediction that all managerial societies inevitably become totalitarian has been disproven.² But he correctly pointed out how technocracy contained certain fascist tendencies. In the case of Japan, these tendencies became more pronounced as a result of the Great Depression, the Japanese occupation of Manchuria, and war mobilization. In Japan and Manchukuo, military and civilian technocrats challenged the prerogatives of Japan's traditional ruling elite and the capitalist system, through which it maintained its power and the allegiance of other social strata.³ These technocrats undermined the principles of capitalist property relations by advocating the separation of capital and management; state controls over industry, labor, and finance; and public over private profit. Due to their indispensable managerial functions and organizational expertise, they wielded strategic power in the economy, government, and the military. They operated at the central nodes within the complex network of all large organizations. In contrast to capitalists, whose rule was indirect and mediated through the bureaucracy and political parties, technocrats as a group could exercise direct and unmediated power because their influence penetrated deeply into the institutions of modern society. If effectively coordinated and mobilized, technocrats could exercise total authoritarian power in society. During the 1930s, Japan's conservative establishment became increasingly alarmed by the subversive, anticapitalist thrust of technocratic policies and programs that threatened its

2. Ibid. vii–viii. In his Preface to the 1960 edition of the *Managerial Revolution*, Burnham concedes that managerial societies have exhibited a greater range of forms.

3. Alvin W. Gouldner, *The Dialectic of Ideology and Technology: The Origins, Grammar, and Future of Ideology* (New York: Seabury Press, 1976), 229–249.

power and privileges. The *zaibatsu*, in particular, fought tooth and nail against technocrats to defend the capitalist “status quo.”

This chapter examines the ideas and strategies of the managerial elite in interwar Japan. During the 1930s, three groups were identified as representing a new political and economic force in Japan. The press referred to them as the “new military men,” “new zaibatsu,” and “new-new bureaucrats” or “reform bureaucrats.” What was “new” about these groups was that they offered innovative, antiliberal approaches toward war, industry, and government that distinguished them from traditional military officers, industrialists, and bureaucrats. The new military men, associated with the army’s Control faction, introduced a new scale and type of war mobilization in preparation for “total war.” New zaibatsu industrialists devised a distinct management philosophy and corporate structures for heavy and chemical industries. Reform bureaucrats advocated a new activist, goal-oriented approach toward government and paved the way for unprecedented state control of politics, private industry, and public services based on their vision of the “managerial state.” Within their respective areas of expertise, these professionals expressed common views and concerns about the transformative impact of technology on society and how to guide that change. They shared the conviction that the challenges arising from industrial capitalism, technological advance, and mass society called forth a new type of leader who possessed technical expertise, stood above narrow private interests, and grasped the integrated mechanisms of modern industrial society. Together they sought to reorganize Japanese society along a new ideological basis. We first consider the role of technology in the rise of this new type of society and leader.

Defining Technology and Technocrat

Technology’s Impact

For the post–World War I generation of Japanese leaders, the keynote of modernity was technology. The symbols of modernity were the machine, train, car, tank, telegraph, and radio. These products of the “second industrial revolution” were made possible by the recent scientific and technological advances, and especially the widespread application of electric power to industry. By the turn of the twentieth century, Japanese technology had developed well beyond the small-scale, labor-intensive techniques of the past, although these continued to coexist with modern methods throughout the interwar period.⁴ It surpassed the

4. Tessa Morris-Suzuki, *The Technological Transformation of Japan* (Cambridge: Cambridge University Press, 1994), 14, 35, 86.

technology of Meiji, embodied in advanced Western machinery, model plants, and foreign technicians, which was directly imported by the state. From the time of World War I, during which Japan profited immensely from favorable trade relations and new markets, it began to establish the foundations of its heavy and chemical industries.

Modernity meant not only the arrival of the machine, but also the application of its principles to society at large. Technology represented a new form of technical rationality expressed in the mass assembly line, the corporation, and the large, complex bureaucracy. It can be defined as the application of science to daily life by means of the dual processes of specialization and integration.⁵ In the case of an automobile, its production required the division of labor into specialized tasks in order to apply scientific knowledge in the manufacture of its individual components, such as the engine, tire, or window. At the same time, it involved the integration of these various tasks and components to create the final product. Technocrats were engaged in the latter task as managers and administrators, whose technical grasp and organization skills enabled them to bring together the various elements and processes into a coherent whole.

Technology's potential impact could be detected most clearly in the most technically advanced industries, where the worker's role became redefined in the production process. In the mass assembly line, the worker performed specialized tasks, whose results comprised one small component of the final product. The plant, that "highly complex organization of men, machines and tools," became the productive unit or means of production.⁶ The significance of mass production technology lay not in its function as a "mechanical principle" for organizing material processes, but as a "social principle" for organizing human activity to perform specific tasks.⁷ As a result, mass production brought about the prioritization of technology over labor. Marx's claim that technology was a means of labor was reversed: labor now became a means of technology.⁸ The organization replaced the individual worker as the unit of production and became the complement of specialization. The organization, in the form of the plant, industrial

5. For definitions of technology, see John Galbraith, *The New Industrial State* (Boston: Houghton Mifflin Company, 1967), 12–13; Herbert Marcuse, "Industrialization and Capitalism in Max Weber," *Negations: Essays in Critical Theory* (Boston: Beacon Press, 1968), 205; Peter Drucker, *The New Society* (New York: Harper & Brothers, 1950), 1–17.

6. Drucker, *The New Society*, 5.

7. Ibid., 2–6.

8. Kawahara Hiroshi develops this theme in his writings on Japanese technocracy. See "Fuishi-zumi c no michi," in Kawahara Hiroshi, Asanuma Kazunori, et al. eds., *Nihon no fuishi-zumi* (Tokyo: Yūhikaku, 1979), 16–17; and Kawahara, *Shōwa seiji shisō kenkyū* (Tokyo: Waseda daigaku shuppan-sha, 1979), 3–34.

enterprise, state trust, or government planning agency, became the institutional expression of modern technology.

With technological advance, organizations became large, costly, and complex.⁹ Modern technology required an increased division of tasks and detailed coordination of a larger number and variety of highly specialized workers and equipment. Both aspects required more time for completion and larger amounts of investment capital to finance the specialists, managers, equipment, and research expenses. In order to capture the economies of scale, capital was increasingly concentrated and controlled by the corporation or the state. In effect, the individual was subsumed by the organization; management became increasingly impersonal and formalistic; and custom, tradition, and private considerations gave way to the scientific criteria of efficiency and economy.¹⁰

Technology, in the form of the organization, brought about a greater need for planning and an increasingly planned and organized economy. Planning can be defined as the temporal forecasting and arrangement of materials and labor in order to provide a future product or service. Planning is enhanced by the new techniques of scientific management and industrial rationalization. Taylorist methods of standardization or inventory control helped increase productivity and avoid future disruptions by establishing criteria to ensure the consistent quality or quantity of materials, labor, and goods. Industrial rationalization, through interfirm cooperation, cartels, and trusts, aimed to increase efficiency and productivity by minimizing the waste of material and effort, especially over-production and excess competition. At the same time, rationalization gave rise to technical inefficiencies as large firms fixed prices, reduced competition, and stifled innovation in order to secure profits. As Thorstein Veblen first pointed out, capitalism became incompatible with technological progress because it subordinated it to nontechnical ends in the pursuit of profit. Technology paved the way for a more organized form of capitalism in which the economy was increasingly planned by cartels and trusts and eventually by the state.

When applied to society at large, planning became the means by which the machine refashioned the worker and society into its own image and made them compatible with its principles. Scholars have described planning as a form of "social technology" or "social technique," which introduced the new principles of machinelike efficiency and organization and brought about an advanced stage of rationalization that societies are unable to control or resist. The machine brought

9. Alvin Gouldner, "Metaphysical Pathos and the Theory of Bureaucracy," *American Political Science Review* 59, no. 2 (June 1955), 500-501.

10. Karl Mannheim, *Man and Society in an Age of Reconstruction* (New York: Harcourt, Brace & Co., 1954), 55.

about an increasingly planned or “technicized” society—in industry, administration, war, work, leisure, health, child-rearing, and science.¹¹ With regard to the latter, scientific research became increasingly planned and oriented toward technical improvement and practical application. Invention by individual, chance discovery as in the case of Edison, Bell, and Marconi, was replaced by a new military-oriented, state-planned science, or “big science,” based on large research facilities and staff and incurring huge expenses and risks underwritten by the public and the state.¹² Science and technology became intertwined as technology was increasingly driven by science and science was technicized. The Japanese even formulated a new term “science-technology” (*kagaku-gijutsu*) to acknowledge this fusion.

The Technocrat’s Role

Technocrats are defined foremost by their managerial function. They are responsible for the administration and coordination of the production process and strategic planning within the organization. They occupy positions in industry and government as production managers, operations directors, commissioners, bureau chiefs, and administrative engineers—among which the latter term was directly adopted by Japanese government engineers to describe their own managerial function.¹³ In interwar Japan, technocrats played an integral role in mediating between the interrelated processes of administrative and technological advance. Their functions were neither purely bureaucratic nor technical. The classic definition of a technocrat—one who wields political power based on a claim to scientific or technical expertise—tends to place greater emphasis on the aspect of technical knowledge rather than political power. But the technocratic function is not that of the technical specialist as chemist, physicist, or engineer, although some began their careers in that capacity. The technician’s role becomes technocratic only when they are appointed to positions of influence in which they can combine technical expertise with political power and translate planning into policy.¹⁴

Technocrats pride themselves on being able to see both the forest *and* the trees; their expertise, however, was not specialized but “functionally polyvalent.”¹⁵

11. On the technicization of society, see Georges Friedmann, “Technological Change and Human Relations,” *British Journal of Sociology* 3, no. 2 (June 1952), 95–116.

12. Jacques Ellul, *The Technological Society* (New York: Vintage Books, 1964), 7–11.

13. Miyamoto Takenosuke, *Tairiku no keizai kensemstu* (Tokyo: Iwanami shoten, 1941), 152.

14. Magali Sarfatti Larson, “Notes on Technocracy: Some Problems of Theory, Ideology, and Power,” *Berkeley Journal of Sociology* 17, no. 5 (1972–1973), 7.

15. Ibid., 11.

Their actual function is better captured by the term *techno-bureaucrat*—one who possesses strategic power and a global vision over the technically driven and administered whole.¹⁶ Technocrats are primarily involved in the technological processes of integration, not specialization, and act in the capacity of managers and administrators of technical specialists. The term *techno-bureaucrat* distinguishes those technocrats “who are in a position to gain support from a bureaucratic machine, or manipulate its fundamental positions.”¹⁷ They are experts in not only the “administration of things,” as Saint-Simon wrote, but also in the “administration of men” and include certain high-level bureaucrats and military officers, industrialists, labor union leaders, and intellectuals employed in think-tanks and planning agencies. Their career paths vary. In Japan, most new zaibatsu executives began their careers as engineers or scientists, founded their own companies, and later collaborated with the government. Others, such as the reform bureaucrats or military planners, rose within the ranks of the bureaucracy and acquired technical expertise by working in supraministerial planning bureaus, studying abroad, and managing technical projects at home or in the colonies. Their technical knowledge, together with important political connections formed through the university, the family, regional ties, and work, propelled them to leading positions in technologically strategic areas. Their authority derived from their managerial positions within the organizational structures, which privileged them with broad, multidimensional perspectives and power.

As managers rather than owners of capital, Japanese technocrats possessed different goals and interests from capitalists. In contrast to capitalists, whose performance was measured by the rate of return or profit on their investments, technocrats were judged by the technical soundness and efficient operation of the firm. Capitalists depended on the preservation of capitalist property relations and conditions for private investment and gain, including the protection of private property, a stable currency, and free access to labor, materials, energy, and foreign trade. In contrast, the technocrat was not dependent on capitalist property relations and could perform a similar function within an alternative, non-capitalist type of system.

Japanese technocrats wielded influence primarily through the strategic use of state power to back their policies and programs. Through the agents of the state, such as the military, bureaucracy, police, and courts, they challenged the prerogatives of capitalists by assuming increased control over the access to

16. On “techno-bureaucrats,” see Larson’s discussion of the term advanced by Nora Mitrani, in *ibid.*, 11–17; Jean Meynaud, *Techocracy* (London: Faber and Faber, 1964), 65–66; Gurvitch, *The Social Frameworks of Knowledge*, 110–114, 207–212.

17. Meynaud, *Techocracy*, 65.

and distribution of the means of production. The Japanese Army, in particular, through military invasion and total war mobilization, provided opportunities for a radical reorganization of Japanese society and the ascendance of technocrats to power. The industrialization and globalization of warfare, which characterized the Russo-Japanese War and World War I, required the total mobilization of society for war and long-term planning. Military officers, together with technical experts, economic bureaucrats, and industrialists, drafted a series of economic control laws, production expansion plans, and the National General Mobilization Law that empowered the state to intervene in the private sphere.

Wartime technocrats extended their political influence by gradually infiltrating the bureaucracy and usurping the planning functions of the nontechnical ministries. From 1927, they established a series of supraministerial economic bureaus and planning agencies, which by the early 1940s, comprised a technical substructure within the Japanese bureaucracy. Within this planning apparatus, which spanned Japan and Manchukuo, military and civilian technocrats drafted the major economic control legislation for Japan and its empire. These wartime emergency laws enabled them to assume effective control over capital within an increasingly controlled economy.

The diverse backgrounds and eclectic approaches of technocrats enabled them to draw support from both the left and right in denouncing capitalists and their supporters. Technocrats approached the problem of planning from a variety of viewpoints. Those tending toward conservative or right-wing views, many of whom were trained in German law or military strategy, saw planning as a means to enhance the power and authority of the state over private interests. Progressive left-wing technocrats, who in their youth had flirted with Marxism and envisioned themselves as the intellectual leaders of an incipient workers' movement, looked to planning to reduce social tensions, increase industrial efficiency and production, and improve the conditions of labor. Their technocratic vision affirmed neither capitalism nor socialism, but managerialism. Moreover, their call for expertise as the primary criteria for leadership, over wealth, peerage, or official rank, appealed to middle-class professionals, such as engineers, scientists, political activists, journalists, teachers, and intellectuals, who felt excluded from the privileges of power. Like other members of the intellectual elite, technocrats saw themselves as interpreters of the latest Western theories and political trends.¹⁸

18. On Japanese intellectuals and fascism, see William Miles Fletcher, *The Search for a New Order: Intellectuals and Fascism in Prewar Japan* (Chapel Hill: University of North Carolina Press, 1982).

Control Officers and Total War

The Japanese Imperial Army has been portrayed as the bastion of feudal reaction, irrational militarism, and emperor worship.¹⁹ Certainly from its creation in the 1870s, the army had been a traditional foe of party politics and laissez-faire capitalism. The oligarch Yamagata Aritomo designed the Japanese Army along the lines of the German Imperial Army. He envisioned it as a central force in a Prussian-style military-bureaucratic government centered on the emperor and dominated by leaders from Chōshū. This static image of Japanese militarism, however, fails to reflect the ways in which the army responded to new political trends, technological advance, and two major global wars.²⁰ From the time of the “Taishō Political Crisis” in 1912, party politicians challenged the army’s strong-arm tactics. During the 1920s, the military’s influence and status diminished as Japanese leaders embraced party cabinets, liberal capitalism, and cooperative diplomacy, which included naval arms limitations and caps on army spending. More important, in response to the lessons of the Russo-Japanese War and World War I, a new professional class of ascendant army officers criticized not only “money politics” but also the army’s traditional region-based cliques and emphasis on spiritual mobilization. These officers advocated troop reductions and mechanization in order to make the army leaner and more effective. Drawing on the lessons of the recent wars, they promoted modern technocratic visions of “total war” and a “national defense state.”

The new generation of army technocrats was affiliated with the “Control faction” (Tōsei-ha) under Nagata Tetsuzan. The Control faction derived its name from its strong opposition to the insubordination of radical officers in the early 1930s and call for more “control” within army ranks. Prominent members included Ishiwara Kanji, Tōjō Hideki, Suzuki Teiichi, Akinaga Tsukizō, Ikeda Sumihisa, Katakura Tadashi, Tanaka Kiyoshi, and Mutō Akira. The Control faction was distinct from other army groups such as the Imperial Way faction (Kōdō-ha), radical young officers, and Purification Group faction (Seigun-ha).²¹ Whereas the latter groups emphasized indoctrination in the principles of the imperial way, warrior spirit, and loyalty to the imperial polity (*kokutai*), the Control faction focused on technological advance, army mechanization, and economic

19. The classic account in English is Ienaga Saburō, *The Pacific War, 1931–1941* (New York: Pantheon Books, 1978), particularly chapter 3.

20. John W. Steinberg, Bruce W. Menning et al. eds., *The Russo-Japanese War in Global Perspective: World War Zero* (Leiden: Brill, 2005); Michael Barnhart, *Japan Prepares for Total War* (Ithaca: Cornell University Press, 1987); Alvin D. Coox, *Nomonhan: Japan Against Russia, 1939* (Stanford: Stanford University Press, 1985).

21. James B. Crowley, “Japanese Army Factionalism,” *Journal of Asian Studies* 21, no. 3 (May 1962), 309–326.

planning. From the late 1920s, they formed study groups such as the Futabakai, Issekikai, and Mokuyōbikai to discuss a wide range of issues including upgrading the army's equipment, eliminating regional cliques, mass mobilization, and resolution of the “Manchurian problem.”

Their social background, training, and intellectual orientation distinguished Control officers from the rank-and-file. Lower-ranked officers were predominantly the sons of small landowners, independent cultivators, and shopkeepers, often from the less-prosperous northeastern regions of Japan. The basic military and ideological training they received at the Military Academy prepared them for battle and instilled in them a strong sense of warrior spirit and loyalty to the emperor. Through participation in clandestine patriotic societies such as the Imperial Sword Party, they became acquainted with the writings of right-wing thinkers such as Kita Ikki, Ōkawa Shūmei, Gondō Seikyō, and Tachibana Kōsaburō.

Control officers formed a part of Japan’s intellectual elite. Most were middle- or upper-middle-class graduates of the highly competitive War College. Like their civilian counterparts within the bureaucracy, they were the products of an emerging meritocratic system that increasingly rewarded ability over social status and regional ties. Similar to Japanese intellectuals, these officers were keen to absorb the latest Western theories and ideas such as those of Ludendorff, Clausewitz, Delbrück, and Haushofer. Many had rounded out their military education with additional study at elite universities in Japan and abroad. More than other high-ranking officers, they demonstrated an aptitude for theory, which they further developed by studying Marxism. In his youth Suzuki Teiichi was influenced by the writings of the Marxist economist Kawakami Hajime, particularly his *Tale of Poverty* (*Bimbō monogatari*). After completing his military education, Suzuki studied economics for a year and briefly worked at the Ministry of Finance.²² Both Akinaga and Ikeda rounded off their military training with three years of study at the economics faculty of Tokyo Imperial University, where they immersed themselves in the debates on capitalism and Marxism. In Manchuria these officers subsequently honed their skills in the elite planning unit of Japan’s Kwantung Army.

Their vision of modern warfare centered on the concept of total war derived from their firsthand observations of World War I.²³ The war signified the first

22. Suzuki Teiichi, *Suzuki Teiichishi danwa sokkiroku* (Tokyo: Nihon kindai shiryō kenkyūkai, 1971), 189.

23. See Mikuriya Takashi, “Kokusaku sōgō kikan setsuoku mondai no shiteki tenkai: Kikakuin sōsetsu ni itaru seiji ryoku gaku,” in Kindai Nihon kenkyūkai-hen, *Nenpō kindai Nihon kenkyū*, vol. 1, *Shōwaki no gunbu* (Tokyo: Yamakawa shuppansha, 1979), 125.

"state total war": extended wars conducted between nations, not just troops, requiring the mobilization of the entire population and self-sufficiency in resources. Future wars would be "total" because they are fought on a number of fronts, command the entire resources of the nation, and potentially bring about mass destruction on a global scale.²⁴ Japan's total war strategist Ishiwara Kanji advanced an apocalyptic vision of a "final war" or a "war to end all wars."²⁵ Although the Russo-Japanese War introduced a new type of industrialized, global warfare, World War I signified the first war of attrition requiring a new scale of national mobilization.²⁶

In the fall of 1915, the Japanese Army commissioned a study of the doctrines and mobilization policies of the European countries at war. The study highlighted their shortages in materiel and troops and the need for more comprehensive resource mobilization.²⁷ In 1917, Colonel Koiso Kuniaki produced a top secret, but highly influential, report entitled *Resources for the Defense of the Empire* (*Teikoku kokubō shigen*) that laid out the requirements for total war and introduced the concepts of "national general mobilization" and "economic self-sufficiency." Koiso envisioned a new type of "national defense economy" to promote exports, curtail imports, preserve domestic resources, stockpile war materials, convert civilian industries to munitions production, and maintain close contact with the Asian continent.²⁸ After directly witnessing World War I as an official observer, Nagata and two army colleagues, Okamura Yasuji and Kohata Toshirō, met at a hot springs resort in Baden-Baden, Germany, in late October 1921 and mapped out Japan's future defense strategy.²⁹ After Nagata returned to Japan, he pushed for reforms to mechanize and rationalize the army and develop the nation's resources for total war. These plans formed the basis for Japan's Munitions Law of 1918.

24. Bōeichō bōei kenshūjo, *Rikugun gunju dōin*, vol. 1, *Keikaku-hen* (Tokyo: Asagumo shinbunsha, 1967), particularly chapter 2; Hans Speier, "Ludendorff: The German Concept of Total War," in Edward Mead Earle, ed., *Makers of Modern Strategy: Military Thought from Machiavelli to Hitler* (New York: Atheneum, 1966).

25. On Ishiwara see Mark R. Peattie, *Ishiwara Kanji and Japan's Confrontation with the West* (Princeton: Princeton University Press, 1975).

26. Recently scholars have argued that the Russo-Japanese War represented the first "world war" by introducing a new type of industrialized, technological, and global warfare. From the perspective of Japanese army technocrats, however, the total war concepts of autarky and national general mobilization were first introduced into planning as a result of World War I. See Steinberg, Menning, et al. eds., *The Russo-Japanese War in Global Perspective*.

27. For an analysis of these reports, see Bōeichō bōei kenshūjo, *Rikugun gunju dōin*, vol. 1, 14–32.

28. Ibid., 41.

29. Mikuriya, "Kokusaku sōgō kikan setsuoku mondai no shiteki tenkai," 125.

Technological innovation and the rise of mass society shaped the total war vision. It drew on the latest technical advances in the heavy and chemical industries, communications, and social management to produce sophisticated weapons, develop natural and synthetic resources, and mobilize the masses. Already during the war, the Japanese Army and Navy began to step up efforts to improve their technical knowledge base in such areas as aircraft, synthetic petroleum, and optics by establishing its own research centers and recruiting scientists and engineers from Japan's leading universities.³⁰ Manchuria, which had come under Japan's indirect control as a result of victory in the Russo-Japanese War, was targeted as a resource base for heavy industry in the army's drive for autarky. World War I also encouraged a new way of thinking about the economy and society and how to effectively mobilize and allocate the nation's human and material resources. General Erich Ludendorff's *Total War* (*Der totale Krieg*) had argued that the underlying reason for Germany's defeat was not so much its inadequacies in military strength or strategy, but rather its failure to prepare for war in other areas such as economic planning and mass propaganda. As the Japanese Army concluded from the German experience: "Their downfall, in short, was that they could not endure the economic blockade of the great powers, the people lacked adequate nutrition, the energy to resist was diminished, and furthermore, as a result of the propaganda wars the people lost their fighting spirit and revolutionary ideas came to the fore; the unavoidable consequence was an internal breakdown and hasty solicitations for peace."³¹ In order to sustain popular morale during a long war, modern governments required not only effective technical means to communicate to the masses but also strategies to organize the civilian war effort. For the above reasons, army planners characterized modern wars as "battles of organizational ability":

The form of war as an international struggle for survival is becoming scientific and organizational, especially with respect to the propaganda wars, economic wars, and military wars. To put it in the extreme, we can say that future international disputes will be a competition between intellect and intellect, a struggle of organization against organization. Therefore, we can probably say that the honor of victory will be given by the opponent to the one who possesses superior *creativity* and *organization*.³²

30. Hiroshige Tetsu, *Kagaku no shakaishi—kindai Nihon no kagaku taisei* (Tokyo: Chūō kōronsha, 1973), 86–87.

31. "Kokubō no hongi to sono kyōka no teishō," in Takahashi Masae, ed., *Gendaishi shiryō*, vol. 5, *Kokkashugi undō* (Tokyo: Misuzu shobō, 1964), 269.

32. Ibid., 277.

As twentieth-century wars were increasingly organized along the principles of modern industry, they required greater planning and organization. The application of advanced technology required immense capital commitments and longer time frames—Ishiwara predicted that Japan would need twenty years to prepare for the final war. On the other hand, as scientific activity became technicized and monopolized by the state, as in the development of synthetic resources, it required immense amounts of funding, a research staff, and laboratories. Technocrats believed that scientific discovery and creativity could be fostered more efficiently within a state planned system rather than under market capitalism.

Following the outbreak of World War I, the army began to lay the institutional and legal groundwork for a national defense state. In 1915, the army created the Temporary Military Research Committee to conduct research on state mobilization. In the spring of 1918, it created the Munitions Industry Mobilization Law and Munitions Bureau. The Munitions Law was drafted under the Terauchi cabinet by Major Suzumura Kōichi based on his study of industrial mobilization policies in Europe. It empowered the Munitions Bureau to assess the nation's capabilities in munitions production in peacetime and to mobilize private factories for war production and even directly manage private enterprises in times of war. Originally, the army intended to grant the state greater powers of intervention and directly challenge the principles of a market economy. According to one plan advanced by the Army General Staff, the state should not only be permitted to expropriate civilian goods; manage or use factories or firms producing those goods; and order the transfer of materials, personnel, or the ownership rights of factories and firms. It should also be permitted to order a firm to divulge its proprietary designs and patents and force a firm to hand over to the state any "excess profits" made through munitions-related production.³³ These provisions were to be applied not only in wartime but in peacetime, since a "state of war" originally was interpreted to include "incidents" as well as the postwar period.³⁴ Although the basic legal framework was put into place early on, the military was slow to implement the law and the state's broad economic powers were not exercised until the outbreak of the China War in 1937.³⁵ The law formed the basis of the National General Mobilization Law of 1938, which gave technocrats a virtual carte blanche to intervene in the private sphere to mobilize the nation for war.

33. General Staff Chief Uehara Yūsaku submitted the plan "Gunjuhin kanri hō" to Army Minister Ōshima Kenichi on December 21, 1917. See Homma Shigeki, "Senji keizai hō no kenkyū," *Shakai kagaku kenkyū* 25, no. 6 (March 1974), 28–30; Bōeichō bōei kenshūjo, *Rikugun gunju dōin*, vol. 1, 53–54.

34. Homma, "Senji keizai hō no kenkyū," 29.

35. Hashikawa Bunzō, "Kokubō kokka no rinen," in Hashikawa Bunzō and Matsumoto Sannosuke, eds., *Kindai Nihon seiji shisōshi*, vol. 2 (Tokyo: Yūhikaku, 1970), 233.

To enhance the state's planning capacity, the army created the first of a series of cabinet-level planning organs. Nagata Tetsuzan originally envisioned a powerful national defense board to be placed directly under the prime minister. With the backing of Army Minister Ugaki Kazushige, he established the Equipment Bureau in 1925 to provision the nation for war and assumed the post of head of its mobilization section. Two years later, Nagata came closer to realizing his vision with the creation of the Resources Bureau. The new bureau took charge of all aspects of military and civilian resource mobilization and emphasized research and long-term resource development. In contrast to the Munitions and Equipment Bureaus, the Resources Bureau was primarily a civilian organ staffed by elite bureaucrats. Matsui Haruo, from the Legislative Bureau, served as head of both general affairs and planning, while Commerce Ministry bureaucrat Uemura Kōgorō became head of research. Army and navy officers on active duty were taken on as special appointees. In the new supraministerial planning agencies, members concurrently held positions within these agencies and their own ministries. The cabinet-level agencies reflected the attempt to promote unified planning at the top and overcome the problem of bureaucratic sectionalism. In order to enhance the stature and effectiveness of the new bureau, the prime minister was granted the authority via imperial command to override individual ministries in matters concerning mobilization. Technocratic planning was further strengthened by the creation of the Cabinet Planning Agency in 1935 and its subsequent merger with the Resources Bureau into the powerful Cabinet Planning Board in 1937.

The technical subsystem emerging within the bureaucracy provided technocrats with an autonomous, institutional base from which to exercise power and establish a national agenda for total war mobilization. The supraministerial planning organs set a precedent for policymaking by which economic planning was undertaken almost exclusively by technocrats and then forced on the Diet for approval in the form of mobilization laws. In passing both the National General Mobilization Law and the New Order legislation, technocrats circumvented the Diet and the political parties; greatly expanded their scope of technical administration; institutionalized access to information; and used their power to pressure the Diet to ratify their policies.³⁶ As a result, the Diet lost its already highly circumscribed role as a political pulpit to analyze and criticize government policy. The political parties, sensing the demise of limited political pluralism, dissolved themselves and sought to carve out a role within the new system.

36. Homma, "Senji keizai hō no kenkyū," 49.

Moreover, through this technical subsystem, control officers skillfully set the terms for national debate. Their vision of total war acquired near hegemonic control over wartime political discourse because of their success in defining the ways in which people thought about the war. Officers tapped into the anxieties of the new era. They presented technological developments as unquestioned historical law. Their vision appeared “scientific” and rational—a kind of social Darwinian law of the survival of the fittest—and effectively tapped into the fears of Japan’s elite that their country might fail to share the world stage with the great powers. Although many bureaucrats, politicians, and business leaders denounced technocrats for their high-handedness and arrogance, they seldom questioned the legitimacy of their total war vision or Japan’s need for self-sufficiency.

New Zaibatsu and Technology-based Industry

Studies of Japan’s war economy have focused predominantly on the central role of the zaibatsu. In both the reports of the Supreme Commander of the Allied Powers, or SCAP, and postwar writings of Marxists, the zaibatsu were portrayed as key perpetrators and beneficiaries of the Pacific War. As the government’s primary munitions suppliers from 1941 until 1945, these industrial and banking conglomerates came to dominate Japan’s economy. By the end of the war, the Big Four zaibatsu, Mitsui, Mitsubishi, Sumitomo, and Yasuda, controlled nearly 25 percent of the country’s total capital and 80 percent of total foreign investments. After the war the two largest zaibatsu, Mitsui and Mitsubishi, with their vast network of 250 to 300 subsidiaries, became the first targets of SCAP’s program to break up the zaibatsu.

Surprisingly little attention, if any, has been paid to the new zaibatsu. As contemporary leaders readily acknowledged, the new zaibatsu were the military’s most trusted allies and chief collaborators in the industrial development of Japan’s empire. In contrast to the traditional zaibatsu, which throughout the 1930s staunchly defended the capitalist status quo and faced the wrath of the right, the new zaibatsu aligned themselves with the forces of “reform” and supported the drive for a national defense state, controlled economy, and autarky. At the behest of the army in 1937, Nissan founder Ayukawa Yoshisuke transferred his entire operations to Manchuria to oversee the development of heavy industry. The Nitchitsu zaibatsu directed chemical industries in Korea. One of the main reasons why SCAP downplayed the role of the new zaibatsu is that during the Pacific War their fortunes rapidly took a turn for the worse. By the end of the war, the share of Nissan’s foreign investments of its total investments had fallen from 75 percent to 6 percent, while the share of overseas investments of Mitsui and

Mitsubishi had increased to 60 percent of its total investments.³⁷ As a result of the reversal of Nissan's fortunes, as well as Ayukawa's loss of faith in the military and belated peace maneuvers to the United States, Nissan appeared less menacing and more "liberal" than the old-line zaibatsu.³⁸

The tendency to downplay or ignore the differences between the two groups also reflected the political agenda of researchers. Occupation authorities and left-wing scholars believed that all zaibatsu were fundamentally undemocratic and feudalistic. They viewed their hierarchical structure as an expression of Japan's patriarchal family system, which denied individual initiative and oppressed workers. Through their oligopolistic control of finance and a wide range of industries, the zaibatsu limited competition, manipulated prices, and squeezed out smaller firms. They used their holding companies to leverage their capital by investing in a majority share of stocks in many firms. Moreover, the zaibatsu exerted their enormous financial power in the government through their high-level connections within the bureaucracy and financial patronage of the political parties. SCAP believed that the extreme concentration of capital in the hands of a small number of families perpetuated the economy's dual structure, in which traditional, backward industries coexisted with modern, advanced ones. Occupation authorities, on the one hand, blamed the zaibatsu for hindering the growth of a healthy, liberal capitalist economy characterized by a vigorous labor market, improved working conditions, and strong consumer demand. On the other hand, Marxists believed that the zaibatsu signified the final stage of state monopoly capitalism and imperialism leading to its eventual overthrow. In sum, what mattered to these researchers was the size and extent of market power of these zaibatsu, and not the distinctions between "new" and "old." Hence they focused on the Big Four and not on the smaller upstarts.

One cannot grasp the true character of Japanese wartime leadership and ideology without understanding the distinct identity of the new zaibatsu. Technologically minded entrepreneurs founded these combines in order to take advantage of the unprecedented opportunities presented by World War I. Following the outbreak of war, multilateral trade relations were suddenly altered in Japan's favor.³⁹ As Europe became embroiled in war and shipping routes were blocked, its export capability rapidly declined and its vast overseas export markets became open to Japanese goods. Europe itself became a net importer of

37. Eleanor M. Hadley, *Antitrust in Japan* (Princeton: Princeton University Press, 1970), 41.

38. Iguchi, *Unfinished Business*, 138–170.

39. On the impact of World War I on Japan, see Hashimoto Juro, "Kyōdai sangyō no kōryū," in Nakamura Takafusa and Odaka Kōnosuke, eds., *Nihon keizaishi*, vol. 6, *Nijū kōzō* (Tokyo: Iwanami shoten, 1989), 82–99.

munitions-related goods from countries such as Japan and the United States, which also increased its imports from Japan and other countries in East Asia. Japan's shipping industry profited enormously from both shipbuilding and soaring freight rates. For new zaibatsu leaders, however, the most important benefit of the war was the curtailment of imports of foreign heavy industry and chemical industrial products such as iron, steel, and synthetic fertilizer. Strong domestic civilian and military demand for heavy and chemical goods, coupled with abundant and relatively inexpensive electric power, provided the ideal setting to engage in heavy industrial catch-up.⁴⁰

Those entrepreneurs who possessed a keen appreciation for the new technological advances and took advantage of the favorable economic setting became the captains of the so-called “new” or “newly emerging” zaibatsu (*shinkō zaibatsu*).⁴¹ The new zaibatsu referred to the five large conglomerates: Ayukawa Yoshisuke’s Nissan, Mori Nobuteru’s Mori Concern, Noguchi Jun’s Nitchitsu (Japan Nitrogenous Fertilizer Company), Nakano Yūrei’s Nissō (Japan Soda), and Ōkōchi Masatoshi’s Riken (Physical and Chemical Research Institute). In contrast to the Big Four zaibatsu and “Taishō zaibatsu” such as Suzuki, Kuhara, Nomura, Iwai, and Matsukata, which concentrated on mining, finance, and commerce, the new zaibatsu focused predominantly on the heavy and chemical industrial sectors.⁴² After the war, they skillfully capitalized on the postwar economic recession to expand their own businesses into sprawling conglomerates.

One of the basic differences between the new and old zaibatsu was their business vision. The new zaibatsu were driven by science and technology, in contrast to the traditional zaibatsu, whose primary goal was to preserve family wealth and honor. These different goals were reflected in their corporate structures. The traditional zaibatsu possessed numerous subsidiaries in diverse, unrelated markets such as banking, insurance, coal mining, paper, machine tools, and shipbuilding. They entered these businesses as a result of special government contracts, personal connections, and market opportunity. The new zaibatsu, on the other hand, organized their various businesses around a key technology and resource such as electro-chemical technology and hydroelectric power. Their multilateral

40. Nakagawa Keiichirō, “Business Strategy and Industrial Structure in Pre-World War II Japan,” in Nakagawa Keiichirō, ed., *The International Conference on Business History*, vol. 1, *Strategy and Structure of Big Business* (Tokyo: University of Tokyo Press, 1976), 26.

41. I adopt the standard English translation of “new zaibatsu” instead of the more precise translation “newly emerging zaibatsu,” even though this term might cause some confusion with the group of “Taishō” zaibatsu, which some Japanese scholars sometimes refer to as “new zaibatsu.”

42. Researchers agree on the classification of the Big Four zaibatsu, but not on the broader Japanese classification of “old zaibatsu” and “Taishō zaibatsu.”

business structures were designed to operate in a more systematized, integrated, and organic fashion.

Most new zaibatsu specialized in the chemical industries. Noguchi founded Nitchitsu in 1908 to produce calcic nitrogen fertilizer utilizing the excess power created by his Kyūshū firm Sogi Electric.⁴³ His firm grew rapidly during World War I, when foreign imports of fertilizer were curtailed. In 1922 Noguchi used these profits to invest in a new plant to produce synthetic ammonium sulphate. From the mid-1920s, Nitchitsu expanded its operations in Japan-occupied Korea to take advantage of its rich resources, particularly hydro-electric power. Noguchi built an electric power facility at the Pujon River, which was the first of several electric power plants that he built in Korea, as well as additional electric power plants in Japan. He also diversified into ammonia-related products such as explosives and rayon in both Japan and Korea. Similarly, Mori and Nakano built their businesses around electro-chemical technology. After securing his own supply of electric power, Mori began production of calcium cyanamide and synthetic ammonia through his Shōwa Fertilizer Company. In the 1930s he diversified into aluminum, electric copper, soda, and explosives and created Shōwa Electric.⁴⁴ Nakano launched his business career by taking over a zinc refining firm and subsequently merging it under the newly formed Nissō. During the war Nissō produced electrolysis soda and later expanded into mining, iron, steel, rayon, and pulp.⁴⁵ Ōkōchi founded the Riken Company (Riken kōgyō) in 1927 to commercialize the scientific and technological inventions of the semipublic Riken and to support future research. Based on its domestic and foreign patents, Riken established subsidiaries to commercialize its findings such as Riken Magnesium, Riken Piston Ring, Riken Electric Wire, and Riken Corundum, and by 1937 had established thirty-one subsidiaries in Japan.⁴⁶

43. Barbara Molony, "Innovation and Business Strategy in the Prewar Chemical Industry," in Yui Tsunehiko and Nakagawa Heiichirō, eds., *The International Conference on Business History*, vol. 15, *Japanese Management in Historical Perspective* (Tokyo: University of Tokyo Press, 1989), 24; Barbara Molony, *Technology and Investment: The Prewar Japanese Chemical Industry* (Cambridge: Harvard University Asia Center, 1990).

44. Mikami Atsufumi, "Old and New Zaibatsu in the History of Japan's Chemical Industry: With Special Reference to the Sumitomo Chemical Co. and the Shōwa Denko Co.," in Ōkochi Akio, and Uchida Hoshimi, eds., *The International Conference on Business History*, vol. 6, *Development and Diffusion of Technology: Electrical and Chemical Industries* (Tokyo: University of Tokyo Press, 1980), 216.

45. Udagawa Masaru, *Shinkō zaibatsu* (Tokyo: Nihon keizai shinbunsha, 1984); Arisawa Hiromi, ed., *Shōwa keizai shi* (Tokyo: Nihon keizai shinbunsha, 1976), 99–102.

46. Udagawa, *Shinkō zaibatsu*, 202–206; Samuel K. Coleman, "Riken from 1945 to 1948: The Re-organization of Japan's Physical and Chemical Research Institute under the American Occupation," *Technology and Culture* 31, no. 2 (April 1990), 229–231.

The different capital structures of the old and new zaibatsu reflected their different business strategies. The former were owned and tightly controlled by the founding family and characterized by their “closed finance.”⁴⁷ Mitsui, Mitsubishi, Sumitomo, and Yasuda possessed their own bank, which funded most of the activities of their various subsidiaries. When these firms incorporated some of their businesses, they did so not to develop new technology-based industries but to secure majority control over their enterprises. The new zaibatsu, which arrived late on the scene without an established name and financial backing, secured funds by issuing public stock and borrowing from outside banks. The enormous capital requirements due to the extensive facilities, expensive research and development, and delayed return on investment, made it difficult for the new zaibatsu to put up sufficient private capital. Noguchi, Mori, and Nakano turned to the Industrial Bank of Japan for funds. In addition, Noguchi and Mori borrowed additional funds from Mitsubishi and Yasuda Bank, respectively. By 1936, Nissō was heavily indebted to the Industrial Bank of Japan. The bank sent its own personnel to inspect Nissō’s affairs and subsequently demanded Nakano’s resignation in 1940.⁴⁸ The willingness of the new zaibatsu to take on greater financial risks made them more vulnerable to the whims of the market and the demands of outside investors.

Nissan was unique in being a publicly owned corporation. Ayukawa established Nissan as a public holding company in 1928, after assuming control of his brother-in-law’s company, Kuhara zaibatsu, and merging it with his own firm, Tobata Casting. Nissan raised funds for its various subsidiaries through public stock offerings. The company made huge profits from the public stock offering of its mining subsidiary, Nippon Mining, at the time of Japan’s reimposition of the gold embargo in the early 1930s. Nippon Mining held a dominant stake in Japan’s gold and copper mining; when gold prices rose, its mining stocks increased tenfold.⁴⁹ Through a series of timely public offerings of shares of his subsidiaries, Ayukawa was able to raise substantial funds to acquire additional companies. As a result of their firm’s large capital requirements and related risks, the new zaibatsu looked to the state as a potential ally in their drive to build up their technological concerns.

47. See Masaki Hisashi’s discussion of the term in his “The Financial Characteristics of the Zaibatsu in Japan: The Old Zaibatsu and Their Closed Finance,” in Keiichirō Nakagawa, ed., *The International Conference on Business History*, vol. 3, *Marketing and Finance in the Course of Industrialization* (Tokyo: University of Tokyo Press, 1978).

48. Arisawa, *Shōwa keizaishi*, 101–102.

49. Ayukawa Yoshisuke, “Nissan kontsuerunu no seiritsu,” in Andō Yoshio, ed., *Shōwashi e no shōgen*, vol. 2 (Tokyo: Hara shobō, 1993), 116–117.

These industrialists represented a new type of technocrat who combined the best of both the engineer-scientist and business entrepreneur. Ayukawa, Noguchi, and Ōkōchi graduated from the engineering faculty of Tokyo Imperial University. Ōkōchi later became a professor of engineering at the university. Nakano worked as a research assistant in the science and engineering department at Kyoto Imperial University. Although the new zaibatsu were technology driven, they distinguished themselves not by their technology, but by their ability to find practical, commercial applications for it. One journalist described Ayukawa as a new type of industrialist who “creates, buys, and sells things from the standpoint of an engineer. He does not need to turn commercial practices to his advantage, nor follow the beaten track of industrialists.”⁵⁰ Moreover, the journalist pointed out, “one cannot attribute this solely to his technical background. There are countless numbers of industrialists with technical backgrounds like Ayukawa. But most of them, before they even realize it, compromise their identity as engineers.”⁵¹ The new zaibatsu industrialists were distinguished by their ability to combine a technological vision with the will and organizational and financial resources to implement that vision.

Their record of succeeding where others had failed was attributed to their ability to combine an eye for technological innovation with superior management strategies. The new zaibatsu were keen to apply the latest American management principles and production techniques to enhance their competitiveness. Ayukawa found in Fordist mass production techniques a way to cheaply and efficiently produce his Dat cars. He was also influenced by the concept of stratified holding companies advanced by the utilities magnate Samuel Insull.⁵² Ōkōchi was influenced by Taylorist ideas of scientific management in advocating a high level of specialization in the production process.

Both the old and new zaibatsu justified their business activities in patriotic terms and claimed to pursue a higher calling that went beyond the pursuit of profits. From the early years of Meiji, zaibatsu leaders appealed to the traditional Japanese values of diligence, self-sacrifice, harmony, and Confucian paternalism.⁵³ Toward the political elite they presented themselves as Restoration patriots (*shishi*), who were implementing the ideals of the Meiji Restoration in business. Toward their employees they adopted a paternalistic stance and exhorted them to put aside private greed and serve the nation. The new zaibatsu, in contrast,

50. Wada Hidekichi, “Kaiketsu Ayukawa Yoshisuke,” *Nihon hyōron* (July 1936), 421.

51. Ibid.

52. Nakagawa, “Business Strategy and Industrial Structure in Pre-World War II Japan,” 30.

53. On zaibatsu nationalism, see Byron K. Marshall, *Capitalism and Nationalism in Prewar Japan: The Ideology of the Business Elite, 1868–1941* (Stanford: Stanford University Press, 1967), esp. 30–50.

promoted a different type of “management nationalism” that embraced the military’s strategic goals to build a national defense state and achieve autarky.⁵⁴ They portrayed their businesses as oriented toward national over private interests and driven by the logic of technology, rather than profits.

The new zaibatsu carefully cultivated this techno-nationalist image to the public in their choice of company names. They generally stayed away from family names, as in the case of Mitsui, Yasuda, Nomura, and Suzuki. They selected names that described their technological focus and often with “Japan” or the era name “Shōwa” attached. For instance, Ayukawa named his holding company Nissan (Japan Industries) and called its subsidiaries Japan Mining and Hitachi (Rising Sun) Electric Power. Noguchi adopted the name Japan Nitrogenous Fertilizer (Nitchitsu), while Nakano named his firm Japan Soda (Nissō). The Mori Concern, which adopted the family name, called its flagship company Shōwa Denkō, which was formed out of the merger of Shōwa Fertilizer and Japan Electric.⁵⁵

The new zaibatsu struck new chords in their critique of liberal capitalism. Ōkōchi promoted his version of “science-based industry” (*kagakushugi kōgyō*) or “knowledge-based industry” (*chinōshugi kōgyō*) in contrast to “capitalist industry” (*shihonshugi kōgyō*).⁵⁶ He distinguished Riken from traditional concerns such as the German wartime empire of Hugo Stinnes, who pursued profits through questionable financing and reckless expansion.⁵⁷ Ōkōchi argued that at Riken, science and technology, not profits, were the guiding principles. As a result Riken bore a much heavier burden than other companies due to the considerable difficulties and financial risks involved in commercializing its inventions.⁵⁸ At the same time, Ōkōchi acknowledged that profits provide the means to pursue its mission of funding scientific research and commercializing inventions. Ōkōchi did not criticize profits but rather the inefficient and rapacious methods by which profits were obtained. In a not-so-subtle criticism of both the old-line and Taishō zaibatsu, he rejected the typical capitalist strategy of maximizing profits by exploiting low-wage labor. The results of such a strategy were, contrary to popular thinking, inefficiencies, waste, higher production costs, and low-quality goods. Ōkōchi argued that what was needed was sophisticated machinery that reduced

54. Udagawa, *Shinkō zaibatsu*, 257.

55. Ibid.; also see Uno Kazushiro, “Ayukawa, Mori, Nakano, Noguchi,” *Jitsugyō no Nihon* (January 1938), 166–167.

56. Ōkōchi’s organization also published the journal *Kagakushugi kōgyō*, through which he and other technocrats promoted their ideas. For an analysis of Ōkōchi’s thought, see Ōno Eiji, “Shinkō zaibatsu no shisō,” in Chō Yukio and Sumiya Kazuhiko, eds., *Kindai Nihon keizai shisō*, vol. 2 (Tokyo: Yūhikaku, 1971), 109–128.

57. Ōkōchi Masatoshi, “Riken kontsuerunu no shimei,” *Kagakushugi kōgyō* (June–July 1937), 60.

58. Ibid., 61.

costs and waste, produced high-quality goods, and sustained higher wages. By placing industry on a scientific basis and shifting its priority from capitalism to scientism, Japan would reduce its costs; increase its wages; and create original, superior products—a vision that he believed Henry Ford had realized in his mass production of cars.⁵⁹ Ultimately such a strategy would strengthen Japan’s export capabilities.

Ayukawa also promoted a more public-spirited capitalism through his idea of the public holding company (*kōkai mochikabu gaisha*). Ayukawa claimed that, unlike the traditional zaibatsu leaders, he did not seek to amass personal wealth. He criticized the “family” (*ie*) tradition of zaibatsu such as Mitsui and Mitsubishi, in which businesses were passed down to sons and adopted sons. Ayukawa’s philosophy was that “you live your own life, accomplish what you can, and ‘that’s it.’”⁶⁰ Like other military leaders, he harbored a distrust of financial and economic theory and denounced classical economics for being too abstract.⁶¹ One journalist noted that “the essence of economics is its lack of conclusions; from the standpoint of the average industrialist, who manipulates a world without conclusions to his own advantage, Ayukawa is certainly an unusual type.”⁶² He was described as one who prefers to deal with “things” instead of abstract ideas.⁶³ Ayukawa saw himself as a servant of public stockholders who uses their funds to create profits in the form of dividends, capital gains, and “concrete” tangible products.⁶⁴

In contrast to the traditional zaibatsu’s uncompromising stance toward organized labor, the new zaibatsu sought to appeal to labor by promoting a new productivist vision of industry in which technology, not profits, is the driving force. They argued that Japan should create high-quality, high-value-added goods through superior technology and efficient, low-cost production, instead of shoddy, low-margin goods through the exploitation of cheap labor. Like the advocates of scientific management and industrial rationalization, they appealed to technology to recast industrial relations from an entrenched, conflict-ridden relationship, in which capitalists profit at the expense of workers, to a dynamic, cooperative relationship, in which workers and capitalists strive together to increase the overall profits of the firm *and* sustain higher wages.⁶⁵ Neither left nor

59. Ibid., 69–70.

60. Ayukawa, “Nissan kontsuerunu no seiritsu,” 113.

61. Wada, “Kaiketsu Ayukawa Yoshisuke,” 422.

62. Ibid.

63. Ayukawa, “Nissan kontsuerunu no seiritsu,” 125.

64. Ibid.

65. William M. Tsutsui, *Manufacturing Ideology: Scientific Management in Twentieth-Century Japan* (Princeton: Princeton University Press, 1998).

right, their vision of modern, technology-based industry transcended both the traditional class orientation of the left and Japanist appeals to time-honored traditions of the right.

Reform Bureaucrats and the Managerial State

The bureaucracy has been commonly viewed as an undifferentiated and monolithic force in Japanese politics. Its ethos and mode of operation have been understood in the Weberian terms of a status-bound, rule-based culture focused on enforcement. Japan's bureaucracy, as other modern bureaucracies, was designed to safeguard the state's authority and legitimacy through the uniform interpretation and application of laws within a fixed legal structure; its mandate was administration, not innovation.⁶⁶ Under this system, legal training was favored over technical training. The bureaucracy took its final form in the early 1900s, at a time when it faced challenges from outside political groups. As the influence of the Meiji oligarchs waned, the bureaucracy sought to acquire a monopoly over legal expertise and "publicness" by establishing a routinized career structure that included graduation from the law faculty of Tokyo Imperial University, the passing of a rigorous civil service exam, and promotion based on specialization and seniority.⁶⁷ During the Meiji and Taishō periods, the bureaucracy aimed to foster the conditions for public order, social harmony, and economic growth. Japan's higher civil servants shared a strong elite consciousness as "officials of the emperor" and sense of duty as "shepherds of the nation" to promote public over private interests, protect the weak from the strong, and mediate between class and sectoral interests.⁶⁸ After the bureaucracy helped establish the first factories and nurture its export industries under the policy of "industrial promotion," it gradually privatized industries and adopted a more laissez-faire approach toward business. At the same time, it devoted considerable energies to delimit political participation and suppress the left wing.

66. Bernard S. Silberman, "The Bureaucratic Role in Japan, 1900–1934: The Bureaucrat as Politician," *Japan in Crisis* (Princeton: Princeton University Press, 1974), 207; Gouldner, *Dialectic of Ideology and Technology*, 250–274.

67. Bernard S. Silberman, "The Bureaucratic State in Japan: The Problem of Authority and Legitimacy," in Tetsuo Najita and J. Victor Koschmann, eds., *Conflict in Modern Japanese History* (Princeton: Princeton University Press, 1982).

68. On Japanese bureaucrats and social policy, see for example Kenneth Pyle, "Advantages of Followership: German Economics and Japanese Bureaucrats," *Journal of Japanese Studies* (autumn 1974), 127–64; Sheldon Garon, *The State and Labor in Modern Japan* (Princeton: Princeton University Press, 1987).

From the late 1920s, however, a group of technically minded bureaucrats began to view the traditional conception of bureaucracy as outdated and incapable of meeting the challenges of the modern era. These so-called "reform bureaucrats" sought to inject a new dynamism and purpose into the bureaucracy and profoundly alter its culture and spirit. They advanced a new technocratic vision of a "managerial state" (*kanri kokka* or *keieisareta kokka*) in place of the "night watchman state" (*yoban kokka*) of the past.⁶⁹

The Japanese state faced new administrative challenges in response to the technicization of war, industry, and society. Particularly after the invasion of Manchuria, the state assumed the central role in total war mobilization, resource development, and managing an expanding empire. Reform bureaucrats criticized the bureaucracy's traditional supervisory, regulatory role as a night-watchman state that focused primarily on rule enforcement and efficient administration. They argued that the increasingly complex and technical nature of government required a more activist, interventionist, and technically sophisticated state. They sought to reinterpret the bureaucracy's mandate from the uniform and impartial application of law to the efficient and effective management of Japan's emerging advanced national defense state (*kōdō kokubō kokka*). The new mandate required active cooperation and collaboration among the bureaucracy, business, and the military across the jurisdictional boundaries dividing public and private and military and civilian affairs.

Reform bureaucrats called on their colleagues to change their attitude of passive conformity and focus on narrow sectional interests to a proactive stance in which bureaucrats assume a sense of responsibility and take decisive action with a feeling of duty to the state. They called for the reeducation of officials to provide them with specialized training and a sense of political accountability, promotion based on the criteria of efficiency and results, and preferential treatment toward those with technical expertise and experience. Particularly with regard to economic affairs, reform bureaucrats advocated the replacement of traditional "legislative bureaucrats" with a new type of bureaucrat described as "administrative technologists," "creative bureaucrats," or "creative engineers" who approach their administrative duties in terms of active management (*keiriteki kinō*) rather than of passive supervision (*kantokuteki kinō*) as in the past.⁷⁰

These bureaucrats believed that technology was introducing a new managerial logic into the bureaucracy. The administrative science expert Rōyama Masamichi argued that in Japan, technological advance was bringing about the

69. Okumura Kiwao, *Nihon seiji no kakushin* (Tokyo: Ikuseisha, 1938), 133.

70. Kashiwara Heitarō, Minobe Yōji, Sakomizu Hisatsune, and Mōri Hideoto, "Zadankai: kakushin kanryō—shintaisci o kataru," *Jitsugyō no Nihon* (January 1941), 54.

technicization of bureaucratic administration by which the traditional administrative functions were evolving toward the management functions of private industry.⁷¹ According to Rōyama, during the nineteenth-century, new mechanical devices, such as the adding machine and telegraph, and new sciences, such as civil engineering, health administration, and accounting, had increased the geographical and functional scope and efficiency of the bureaucracy. After World War I, this "material technology" gradually began to induce a qualitative change in administrative ability by bringing about the technicization of the administrative function itself. Rōyama viewed bureaucratic administration as a form of technology, which he defined as "the application of knowledge to achieve certain goals."⁷² He believed that administration was acquiring functional, goal-oriented characteristics by utilizing various methods or management elements to attain state goals. Although the bureaucracy did not determine the goals itself—these are determined in the political arena—it exercised decision-making power over the means to achieve them. Rōyama referred to this "system of practical, task-oriented decision-making" as "management" (*kanri*).

Moreover, although management is not a technology itself, it is very much a technological matter. That is, the implementation of specific government goals through the employment of immense numbers of people, the expenditure of hundreds of millions [of yen] worth of funds and goods, and the planning and operation of complex organizations, which [together] represent one administrative task itself, is a problem that requires independent, technological deliberation. It is clear that the assembly of these various elements, such as personnel, funds, materials, and organizations, and their use for established objectives forms one system of action-oriented decision-making. State administration today is in a state of rapid reorganization, training, and retooling of management elements which are already rapidly developing phenomena of business management and administration in private firms. Since the European war and particularly in today's era of reform, the problem of administration is none other than the problem of management.⁷³

The increased need for technocratic expertise in military and economic affairs raised the status and influence of technically oriented bureaucrats and their affiliated ministries and planning bureaus within the government. Modern technology and the new developments in science-technology elevated the

71. Rōyama Masamichi, "Gyōsei to gijutsu," *Kagakushugi kōgyō* (May 1938), 13–23.

72. Ibid., 18.

73. Ibid.

image of technology from an artisan's trade into something more respectable, rational, and socially relevant.⁷⁴ Moreover, this new techno-scientific complex and its technical personnel represented a new technical subsystem and planning network within the bureaucracy.⁷⁵ In Japan, these supraministerial planning bureaus and agencies enabled technocrats to gradually increase their control over strategic, technology-related areas such as materials production and planning, energy resources, foreign trade, communications, and propaganda both at home and in Manchuria. Furthermore, they were empowered by a series of unprecedented mobilization and control laws backed by the force of the state.

Reform bureaucrats operated at the heart of the state's expanding industrial and technical planning network. They were predominantly young career bureaucrats from the technical ministries and cabinet planning agencies whose technocratic orientation and expertise made them compatible partners to military planners. Some of the most influential technocrats worked at the Ministry of Commerce and Industry, which played a leading role in the military's war mobilization program.⁷⁶ The Commerce Ministry's mandate to develop, improve, and promote industry encouraged an innovative approach toward economic policy that the military required. During the war, this dynamic approach became especially important when foreign trade declined and the economy shifted to a semiautarkic, materials-based economy. In contrast, the Finance Ministry, given its role of securing and distributing public funds, tended to value economic stability over innovation. Its fiscally conservative stance often conflicted with the military's demands for increased budgets. Kishi Nobusuke rose to the ranks of vice minister and minister of commerce, and later vice minister of munitions during the early 1940s. His mentor, Yoshino Shinji, served as vice minister and minister of commerce between 1931 and 1938. Kishi's protégé Shiina became vice minister of munitions in the early 1940s. At the Cabinet Planning Board, the top civilian planners included Hoshino Naoki, Minobe Yōji, Mōri Hideoto, Okumura Kiwao, and Sakomizu Hisatsune. Unlike Kishi, Shiina, and Yoshino these men did not rise to the top posts within their own ministries; most achieved prominence through their activities at supraministerial agencies and served as important conduits between the Cabinet Planning Board and their home base. Closely affiliated with this group were young left-wing planners such as Wada Hiroo, Kashiwara Heitarō, Katsumata Seiichi, and Inaba Hidezō.⁷⁷

74. Gouldner, *Dialectic of Ideology and Technology*, 251–254.

75. Ibid.

76. On the history of the Ministry of Commerce and Industry, see Johnson, *MITI and the Japanese Miracle*.

77. For a study of these left-wing technocrats, see Laura Hein, *Reasonable Words, Powerful Men* (Berkeley: University of California Press, 2004).

The reform bureaucrats formed a cohesive group based on their university ties and shared professional training at the technical ministries, cabinet research agencies, and planning departments of Japan and Manchukuo. In terms of their formal education, most studied law at Tokyo Imperial University.⁷⁸ Already at the university, a certain technocratic orientation informed their rather atypical choice of bureaucratic career paths. Many opted for the technology-related "second tier" ministries instead of the prestigious Home and Finance ministries, because they believed that the technical ministries would play a pivotal role in the future. Kishi, a top student of German law, chose the Commerce and Agriculture Ministry over the Home Ministry. He later claimed that his decision was based on the belief that:

As for the future of Japan, in order for resource-poor Japan to maintain itself, it must establish itself through trade. In order to establish itself through trade, industrial technology needs to be developed, and through technological superiority, industry must be developed. The Ministry of Commerce and Agriculture was in charge of that administration.⁷⁹

Okumura justified his decision to join the less prestigious Ministry of Communications in terms of his interest in the state's social role, particularly the administration of public utility enterprises.⁸⁰ University ties provided these men with lifelong personal networks and an elite esprit de corps that was further strengthened by their new identity as leaders at the forefront of technology.

More than their alumni networks, their shared practical training in research, planning, and implementation throughout the 1930s and early 1940s fostered close working relationships and a common technocratic approach. The financial crisis, domestic right-wing terror, and the military's expanding presence in north China prompted the emergence of military-bureaucratic cabinets and the need for active and continuous collaboration across ministerial lines. From 1932, reform bureaucrats were sent to Manchuria to draft and deliberate policies under the "internal guidance" of army technocrats. The experience of joint planning among civilian and military technocrats in Japan and Manchuria gave rise to a new conception of state-society relations and calls for a more activist state to prepare for total war.

78. Two exceptions were Mori Hidecoto, who specialized in political science at the law faculty of Tokyo Imperial University, and Inaba Hidezo, who studied philosophy at Kyoto Imperial University.

79. Kishi Nobusuke, "Shisei de ugokanu mono wa nai: Watakushi no jinsai o kettei zuketa Shōin sensei no kotoba." Kishi's speech at the Bun'yūkai on May 9, 1980, 6. Kishi graduated at the top of his class in the law faculty at Tokyo Imperial University and was a favored student of Uesugi Shinkichi, who invited him to stay on at the university and pursue an academic career.

80. Okumura Kiwao, *Teishin ronso* (Tokyo: Kotsū kenkyūsha, 1935), I.

Like their counterparts in the military and industry, the reform bureaucrats were above all pragmatists, not ideologues. Their vision did not derive from one particular intellectual source. In their writings and drafts they drew on a diverse body of work including Marxist theory, Soviet planning models, New Deal writings, Nazi political-economic theory, and Japanese right-wing tracts. The group's eclectic approach reflected the diverse intellectual backgrounds, personal styles, and functional roles of its members. The group's acknowledged ideologues, Mōri Hideoto and Okumura Kiwao, formulated the basic principles and conceptual framework for planning. Both men were intellectual-bureaucrats who were conversant in Western political-economic theory and published their writings in professional and mass journals. The more centrist, business-minded members, such as Kishi, Shiina, Minobe, and Sakomizu, acted as public spokesmen for the group and took charge of implementation. They translated the technical language of planning to the public and mediated between the military, bureaucracy, and business. The left wing included economic researchers such as Wada Hiroo, Inaba Hidetō, and Katsumata Seiichi.

Their early intellectual training and political background informed their diverse approaches toward planning. At the university, most reform bureaucrats studied either German or English law. Those who studied German law, such as Kishi, Shiina, and Okumura, tended toward a more statist approach. Kishi was a protégé of the right-wing legal scholar Uesugi Shinkichi. Both Kishi and Okumura drew directly on German models of economic and political mobilization based on their firsthand observations of German political and industrial organizations in the 1930s. In contrast, students of English law, such as Minobe, Sakomizu, and Wada incorporated progressive, socialistic approaches into their state-centered views. In their youth they flirted with left-wing politics and developed their theoretical skills by studying Marxism.⁸¹ They cultivated their interest in academic Marxism through participation in left-wing student organizations such as Yoshino Sakuzō's Shinjinkai, social welfare projects such as the Yanagishima Settlement, and sports clubs.⁸² Although they abandoned their social activism on entering the ministry, they retained a penchant for Marxist theoretical reasoning in their planning: these bureaucrats tended to

81. Furukawa Takahisa, "Kakushin kanryō no shisō to kōdō" *Shigaku zasshi* (April 1990), 1–38; Furukawa Takahisa, *Shōwa senshūki no sōgō kokokusaku kikan* (Tokyo: Yoshikawa kōbunkan, 1992). On the influence of Marxism on Japanese bureaucrats and intellectuals, see Hein, *Reasonable Men, Powerful Words*; Bai Gao, "Arisawa Hiromi and His Theory of the Managed Economy," *Journal of Japanese Studies* 20, no. 1 (winter 1994), 115–153; and Gao, *Economic Ideology and Japanese Industrial Policy* (New York: Cambridge University Press, 1997).

82. Nihon hyōron shinsha, ed., *Yoyōtaru: Minobe Yoji tsuitōroku* (Tokyo: Nihon hyōron shinsha, 1954), 328–332.

view individual events within broader historical processes and adopted a holistic view of political-economy as an organic, integrated system with its own iron laws and internal logic. Colleagues of Minobe attributed his remarkable grasp of the problems of the controlled economy and skill in planning and implementation to his solid foundation in Marxist theory.⁸³ Their intellectual approach was similar to that of the new generation of military planners who had also studied Marxism such as Suzuki Teiichi, Akinaga Tsukizō, and Ikeda Sumi-hisa, and left-wing economists such as Arisawa Hiromi, Ōuchi Hyōe, and Ryū Shintarō. Although they drew on Marxist conceptual tools and embraced the socialist faith in state planning, they rejected the theory of class conflict. By the late 1930s reform bureaucrats on the left, right, and center argued that the motor force of history was neither class struggle nor individualism, but technology and the *Volk*. They believed that the new era was moving beyond the materialism and class orientation of liberalism and Marxism and embracing a third way that they associated with European fascism.

The National Economy

By the time of the Great Depression, neither the left nor labor posed a serious challenge to the state. The Communist Party had been driven underground since 1927, and labor issues took a back seat to the more pressing demands of the rural crisis, economic recovery, and war mobilization. The moderate Sōdōmei-led trade union suffered a rapid decline after making important legislative gains throughout the 1920s. In its place emerged increasingly vocal right-wing ultranationalist, Japanist, and pan-Asianist groups. In the new climate of political reaction and war fever, labor joined hands with the state. The recently formed Social Masses Party promoted corporatist notions of an organic social order that denied the conflict of labor and capital.

With the rise of the managerial state, political struggles in the workplace between management and labor were overshadowed by new battles at the industry and national level between big business and the state. The main challenge faced by reform bureaucrats was to obtain the cooperation of big business. With the onslaught of the world depression, large firms in industries such as shipbuilding, electrical machinery, and chemicals began to engage in destructive price cutting, even selling below cost, in order to maintain international market share. The Commerce Ministry proposed the formation of industrial cartels modeled on those created for small- and medium-sized export firms in 1925.⁸⁴ Under

83. Ibid., 325–326, 342–343.

84. Johnson, *MITI and the Japanese Miracle*, 98–99.

the Exporters Association Law, the state established export unions for various product lines and an inspection system to control the quality, price, and quantity of export goods. Under the Major Export Industries Association Law, the state succeeded in inducing small- and medium-sized firms to coordinate production and pricing by offering government subsidies and facilities for cartel members.

In contrast to the positive response of small- and medium-sized firms to state efforts, however, the ministry faced considerable resistance from big business. Executives complained that the ministry's rationalization policies came too late. Had such measures been promoted in the initial phases of depression, they argued, their firms would have welcomed assistance. Since they had already formulated their own response to the crisis, they were not willing to adopt a new course. Moreover, they pointed out, given the government's tight money policy, it clearly did not have adequate funds to support the type of overall restructuring needed.⁸⁵

As reform bureaucrats soon realized, unlike the small- and medium-sized firms, the heavy industrial concerns were fewer in number and wielded more power within their respective industries. The considerable expertise and hubris of their leaders and their extensive personal ties within the business and financial community made them less willing to accept guidance from bureaucrats. At the same time, Commerce Ministry officials feared that if they allowed the present events to run their course, these firms would end up hurting not only themselves, but also their industries, workers, raw materials suppliers and distributors, financial institutions, and investors. The root of the problem, as Commerce Minister Yoshino Shinji saw it, lay in the system of liberal capitalism and its short-sighted emphasis on profits and free competition.⁸⁶

Yoshino assigned his protégé Kishi the task of formulating an appropriate response. Reflecting on his firsthand investigations of Germany's industrial rationalization movement in 1927 and 1930, Kishi advanced two basic principles. The first was that cost efficiency, or the minimization of input per unit of output, should be the preferred method of achieving profits. He criticized the American approach of increasing profits by engaging in wasteful and inefficient practices such as fixing prices, undercutting competitor's prices, and artificially limiting supply.⁸⁷ He believed that firms could become more profitable if they systematically applied the new management technologies such as scientific management,

85. Yoshino Shinji, "Sangyō gōrika," in Andō Yoshio, ed., *Shōwashi e no shōgen*, vol. 1 (Tokyo: Hara shobō, 1993), 172–174.

86. Yoshino Shinji, *Nihon kōgyō seisaku* (Tokyo: Nihon hyōronsha, 1935), 320.

87. Kishi, "Ōshū ni okeru sangyō gōrika no jissai ni tsuite," *Sangyō gōrika* (January 1932), 31–32.

mass production, and techniques to streamline the production process and distribution networks.

The second principle was the importance of national cooperative effort. Kishi praised the German notion of "national cooperative effort" or "community of work" (*Gemeinarbeit des Volks, Gemeinwirtschaft, Gemeinschaftsarbeit der ganzen Wirtschaft*), which he believed reflected the "true spirit" of German rationalization.⁸⁸ For Kishi, the concept represented a new way of thinking about the economy. In contrast to the liberal mentality of profit for profit's sake, it emphasized order, efficiency, and cooperation. This corporatist vision promoted the idea of an organic, hierarchical, functionalist society comprised of occupational estates, rather than a class-based society made up of winners and losers. It was employed in the early 1900s by German heavy industry to counter the class-based challenges of labor.⁸⁹ By the late 1920s it was taken up by semiofficial organizations such as Germany's rationalization board, the Reichskuratorium für Wirtschaftlichkeit (RKW), to promote cooperation among firms.⁹⁰

Kishi was impressed by the RKW's promotion of "experience exchange" (*Erfahrungsaustausch*) in which firms joined industry-based groups and shared information about their production, management, technology, and sales strategies.⁹¹ In contrast to the laissez-faire system of free competition in which firms closely guarded information about their operations and managed their businesses in isolation, the new system encouraged firms to disclose their management secrets with the aim to improve their own techniques by learning from their competitors.⁹² Kishi also praised the German strategy of comparing business results (*Betriebsvergleich, jigyō hikaku*) by which firms disclose proprietary data on output, expenses, and sales to a third party. This intermediary party then ranked each firm's performance based on the average figures of the group and dispatched consultants to improve each firm's business strategy. He proposed

88. Kishi, Yatsugi, and Ito, "Kankai seikai rokujūnen: Dai-ikkai Manshū jidai," 293; Kishi, "Ōshū ni okeru sangyō gorika no jissai ni tsuite," 30.

89. See Dennis Sweeney, "Corporatist Discourse and Heavy Industry in Wilhelmine Germany: Factory Culture and Employer Politics in the Saar," *Comparative Studies in Society and History* 43 (October 2001), 701–734.

90. On the RKW, see Robert E. Brady, *The Rationalization Movement in German Industry: A Study in the Evolution of Economic Planning* (Berkeley: University of California Press, 1933); Mary Nolan, *Visions of Modernity* (Oxford: Oxford University Press, 1994); J. Ronald Shearer, "The Reichskuratorium für Wirtschaftlichkeit: Fordism and Organized Capitalism in Germany, 1918–1945," *Business History Review* 71, no. 4 (winter 1997), 569–602; Dr. Georg Freitag, "Das Haus Siemens und das RKW: Ein Beitrag zur Gründung und Entwicklung der deutschen Rationalisierungsbewegung," *Rationalisierung* 14 (1963).

91. *Reichskuratorium für Wirtschaftlichkeit, RKW Nachrichten* (September 1931).

92. Kishi Nobusuke, "Sangyō gorika undō ni arawaretaru keiken kōkan," *Kogyō keizai kenkyū* (July 1932), 103.

that such measures be adopted by Japan's Temporary Industrial Rationality Bureau, which was modeled on the RKW.

Both the principles of "national community of work" and cost efficiency formed the cornerstone of the concept of the "national economy" (*Volkswirtschaft, kokumin keizai*). Originally derived from Friedrich List's mercantilist concept of economic nationalism and competition among states, the vision of national economy acquired a more pronounced technocratic meaning by the 1930s.⁹³ The RKW described Germany's national economy as being constituted on the technical (intrafirm), commercial (intraindustry), national, and international levels and based on the four principles of systematic order, efficiency, statistical comparison, and societal well-being.⁹⁴ Similarly, the reform bureaucrats defined Japan's national economy in terms of the application of science and maximum cooperative effort—or systematic, technical, communal work—for the purpose of achieving a more rational organization of the economy and increasing society's well-being. National economy promoted outward competition among states and inward cooperation among domestic firms. But its main focus was on achieving optimal balance and coordination between and among the various, often conflicting, levels and means of rationalization. National economy signified a highly integrated, coordinated, functionally interdependent economy, a type of "corporatist economy" (*korporative Wirtschaft*) or "confederal economy" (*Verbundwirtschaft*) that required long-range planning by firms, intermediary organizations, and the state.⁹⁵

National economy served as the guiding concept under which bureaucrats formulated their first control policy toward big business. Under the Important Industries Control Law of April 1, 1931, if more than two-thirds of the firms within an industry joined a cartel and that cartel was approved by the state, the state could enforce the participation of outside firms in the cartel. The state would authorize a cartel if it determined that its activities promoted the "healthy development of the national economy" and "protected public interests."⁹⁶ In cases where the state found that the activities of the cartel violated public interests, it had the right to modify or abolish the cartel, as well as impose fines and penalties on its violators. In terms of the purpose of the law—the formation of cartels

93. Kishi, "Ōshū ni okeru sangyō gorika no jissai ni tsuite," 34.

94. *Reichskuratorium für Wirtschaftlichkeit, RKW Nachrichten* (July 1931), 109. See also Friedrich von Gottl-Ottilienfeld's *Vom Sinn der Rationalisierung* (Jena: Gustav Fischer, 1929), which provided one theoretical basis for the RKW's activities.

95. Robert Brady, *The Rationalization Movement in German Industry*, 7, 362, 395; *Reichskuratorium für Wirtschaftlichkeit, RKW Nachrichten* (August 1931), 127.

96. Kishi Nobusuke, "Jūyō sangyō tōsei hō kaisetsu," *Kogyō keizai kenkyū* (April 1932), 51–76.

among the major firms—it represented a continuation of the ministry's cartel policy—but now enforced by the state.

Yoshino emphasized after the war that there was no intent to establish a controlled or planned economy at the time.⁹⁷ Nevertheless, important precedents were established. From the legal point of view, the nature of industrial cartels changed from private entities based on private contract, to public entities based on state law.⁹⁸ Whereas cartel policy before the depression was promoted within the liberal capitalist framework of *laissez-faire* and the protection of private property, now cartels were to be administered from the standpoint of the national economy. Kishi pointed out that the new law was the first to use the term *national economy* in legal language, and that it was conceived specifically with a critical view toward liberalism.⁹⁹ The Important Industries Control Law was only the first of a series of state control measures. More than its modest goals, its underlying principle of national economy introduced an important conceptual basis upon which to justify state intervention into the affairs of private enterprise and alter the relationship between the public and private sector.

The technocratic visions and strategies of total war officers, new zaibatsu, and reform bureaucrats revealed a new, modern mindset. Their critique of liberalism was not a rejection of modernity and a reactionary turn to the past but rather a quintessentially modernist act. The rise of technology brought about the technicization of not only war, industry, and administration, but also of Japanese professionals themselves. As modernists, they became both the subjects as well as objects of technology; they embraced technology and in turn were transformed by it.

The wartime collaboration among technocrats was, to a certain extent, a marriage of convenience—a unique opportunity to influence government policy. But these groups also shared a broad basis for cooperation in terms of a similar worldview and common language of technocratic planning. First, despite their different professional concerns and interests, these groups tended to focus on the interrelatedness of various processes. In order to prepare for total war, military officers aimed at comprehensive mobilization of the nation's material and spiritual resources. New zaibatsu leaders sought to integrate various aspects of production in technologically related areas. Within the framework of the managerial state, reform bureaucrats attempted to coordinate the development and

97. Yoshino, "Sangyō gōrika," 176.

98. Homma, "Senji keizai hō no kenkyū," 6–15.

99. Kishi, "Sangyō gōrika yori tōsei keizai e," *Sangyō gōrika* (April 1934) 33; Kishi, "Jūyō sangyō tōsei hō kaisetsu," 54.

administration of important industries and social services via state guidance and control. Whereas in the past firms had viewed each other as competitors, now they should join together and compete as one nation. Bureaucrats should overcome sectionalism and red tape and strive toward efficient and effective administration. Second, the various strategies of these groups reflected a more general shift in focus from specific processes and actors to metaprocesses and broader units: not just troops, but nations would fight future wars; not individual businesses, but a number of technologically linked businesses were combined under one firm; and not the individual firm or ministry, but the economy and bureaucracy as a whole became the defining unit. Third, they formed their critical stance toward Japan's liberal capitalist system from the standpoint of technology and state nationalism. Military leaders viewed the profit orientation and laissez-faire approach as an obstacle to national mobilization. New zaibatsu leaders set as their overall goal the advancement and application of public technology instead of the preservation of private wealth. Reform bureaucrats viewed sectionalism and narrow specialization within the bureaucracy as short-sighted and against the national interests. Moreover, these leaders tended to view themselves as transcendent technocrats and nationalists who stood above private interests and represented the interests of the whole. Both total war officers and reform bureaucrats believed that they possessed the technical expertise and insight to command greater cooperation within and among various industrial sectors, ministerial departments, and private groups, while new zaibatsu leaders believed themselves to be the servants of the public interest and of Japanese science-technology in the modern era.

Finally, in their visions of technocratic modernity, these leaders sought a third way beyond liberal capitalism and socialism that drew on both left- and right-wing critiques of capitalism. Japanese technocrats viewed the Marxist class-based critique of the left and the restorationism and Japanism of the right as outdated and ineffective because both failed to account for the rise of technology. But they selectively embraced aspects of the left-wing populist, socialist vision and faith in state planning and the right-wing appeal to Japanese tradition and state and ethnic nationalism and incorporated them into their own technocratic agendas. By sublating the anticapitalist agendas of the left and right, technocrats helped reshape the political landscape of interwar Japan. By the mid- to late 1930s the main battle lines in policymaking were drawn no longer along the horizontal axis of left, right, and center or progress versus reaction, but along the vertical axis of liberal capitalist status quo (*genjō iji*) versus reform (*kakushin*).¹⁰⁰

100. Itō Takashi, "The Role of Right-Wing Organizations in Japan," in Dorothy Borg and Okamoto Shumpei, eds., *Pearl Harbor as History: Japanese-American Relations, 1931–1941* (New York: Columbia University Press, 1975), 487–491.