

Economateriality: How the Future Entered Government

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In 1947, an Egyptian entrepreneur named Adriano Daninos published a proposal in a scientific journal in Cairo to build a new dam across the Nile. Placed upstream of a smaller masonry barrage built fifty years earlier by the British at Aswan, the new rock-filled structure would be so large that the reservoir it created would stretch more than five hundred kilometers to the south. “Daninos is a man with a mission,” reported an official at the World Bank in Washington, where Daninos later went to pitch his plan. The official noted that the scheme concerned not just the building of the dam but “land reclamation and irrigation connected therewith, production of power, and construction of plants to use that power in mining, making fertilizers, other manufacturing, and possibly iron and steel.”¹ Before publishing his plan, Daninos had visited the Tennessee Valley Authority in the US and similar integrated hydroelectric, river control, irrigation, and industrialization projects in the Limousin in southwest France. These gargantuan schemes for reorganizing forces of nature, systems of agriculture,

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1. Hector Prud’homme, memorandum, “Nile Project—visit of Mr. Daninos,” 27 Jan. 1953, documents relating to the *Report on the Agricultural Aspects of the Sudd el Aali Project (High Aswan Dam Project)*, WB 1589793, World Bank Group Archives, Washington, D. C. The memo spells Daninos’s first name as Adrien.

flows of energy, powers of labor, and material production were known as total development.²

Despite the scale of the venture, Daninos was not asking the World Bank for money. He merely sought help coordinating the involvement of US and European engineering firms. The capital would come from London or Paris—either from the large reserves of sterling built up by the Egyptian government at the Bank of England during the war or from the Anglo-French-owned Suez Canal Company, which was due to revert to Egyptian ownership soon after the building of the dam. The company's income and profits were surging with the postwar growth of oil shipments through the canal.³ As a director of the Suez Canal Company pointed out in private to officials at the World Bank, the canal tolls paid by shipping companies could cover the cost of the construction loans.⁴

But the bank was unwilling to play only a marginal role. Excluded from postwar reconstruction in Europe, it was keen to reinvent itself as the conduit for the supply of economic advice and the selling of Wall Street investment loans to countries of the south.⁵ So it put itself forward to coordinate government and private investment in the dam. The bank's

2. See the excellent Ahmad Shokr, "Hydropolitics, Economy, and the Aswan High Dam in Mid-Century Egypt," *Arab Studies Journal* 17 (Spring 2009): 9–31, which brings to light the origins and scope of Daninos's plan and its political and engineering context. Other studies of the dam include John Waterbury, *Hydropolitics of the Nile Valley* (Syracuse, N.Y., 1979), and Tom Little, *High Dam at Aswan: The Subjugation of the Nile Valley*. A correspondent for the *London Times* and *The Economist* and head of the Arab News Agency, Little was part of an MI6 spy ring in Cairo. When the Egyptian secret police broke up the ring in 1956, arresting members of the ANA staff, they left Tom Little in place and supplied him with disinformation, which he fed back to London; see Stephen Dorril, *MI6: Inside the Covert World of Her Majesty's Secret Intelligence Service* (New York, 2002), pp. 631–32.

3. The company's profits had increased more than three-fold between 1947 and 1950; see Caroline Piquet, "An International Company in Egypt: Suez, 1858–1956," paper presented at European Business History Association, eleventh annual conference, Geneva, 13–15 Sept. 2007, www.ebha.org/ebha2007/prgm.html, p. 12.

4. See Memorandum, F.D. Gregh, "EGYPT—Visit of Mr. J. Georges-Picot to Mr. Garner and Myself," 26 May 1954, documents relating to the *Report on the Agricultural Aspects of the Sudd el Aali Project (High Aswan Dam Project)*, WB 1589793, World Bank Group Archives. Jacques Georges-Picot was the general manager of the Suez Canal Co.

5. See Amy L. S. Staples, *The Birth of Development: How the World Bank, Food and Agriculture Organization, and World Health Organization Changed the World, 1945–1965* (Kent, Ohio, 2006); Michele Alacevich, *The Political Economy of the World Bank: The Early Years*, trans. pub. (Palo Alto, Calif., 2009); and Devesh Kapur, John P. Lewis, and Richard Webb, *The World Bank: Its First Half Century* (Washington, D.C., 1997).

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involvement did not make the project any cheaper. On the contrary, European engineering firms had estimated the cost of the dam at about £200 million sterling, but when the bank finished its calculations the estimate had more than doubled, to £500 million.⁶ The bank had added to the scheme the cost of digging irrigation canals that would allow Egyptian farmers to replace fast-growing food crops with the slower-growing industrial crops—cotton and sugar cane—needed to pay off the bonds the bank would raise on Wall Street. But the bank had added something more: a new set of calculations about the future. The novel way to represent this calculated future was to refer to it as the economy.

1

Around 1948, it became common in American political debate to talk about the economy. References to this object in government and newspapers were starting to appear in a routine, repetitive way that made the economy appear for the first time as a matter of fact. It was no longer always necessary to explain what the term meant or to qualify it in some way.

The idea of the economy itself had been around for at least a dozen years. But in the period before the Second World War the word still often carried echoes of an older sense when economy described a process, not a thing. In everyday usage, the term referred to the act of economizing, of making prudent use of limited resources. The US Economy Act of 1933, for example, was not a law to regulate the economy. It was an act of economy, or economizing, intended to cut the federal deficit by reducing the pay of government workers. In a wider sense, the word *economy* had often meant modes of government itself. As in the phrase *political economy*, it referred to forms of administration and knowhow concerned with the efficient management of human lives and material resources. Even in the late 1930s, as a new meaning of the term emerged, this older sense of governing was usually still present. The word occurred frequently in newspaper discussion of topics such as planned economy versus market economy, of the war economy in Japan, and of the German experiment in controlled economy.⁷

Occasionally in the years before the war the new meaning of the term

6. See "Memo on Meeting of Mr. Betts with Mackenzie," in "EGYPT: Development Schemes—High Aswan Dam—Sterling Releases," 16 Sept. 1955, Public Record Office, BT, 213/44, 1955, National Archives of the UK, and International Bank for Reconstruction and Development (IBRD), "External Aid for Egypt," in "EGYPT: Development Schemes—High Aswan Dam—Sterling Releases," memo, 18 Nov. 1955, BT, 213/44, 1955.

7. See Eliot Janeway, "Japan's Economy Is Strained: Protests Go to Him," *New York Times*, 9 Jan. 1938, p. E4, and Anne O'Hare McCormick, "Europe: Germany Pushes Experiment in Controlled Economy," *New York Times*, 29 Jan. 1938, p. E4.

appeared explicitly, referring to the economy as a distinct space or object. In January 1938, the *New York Times* reported on a monograph published by two economists at the New School for Social Research.⁸ Using data from the new Roosevelt income taxes, the study argued that taxing the better-off had created a scarcity of investment capital “in the American economy.”⁹ It was perhaps no coincidence that the authors were, as the *New York Times* noted, “members of the school of economic thought that holds governmental intervention in the economy to be a necessary datum of modern crisis policy, of which John Maynard Keynes of England is a prominent spokesman.” Equally significant was the fact that the revenue acts of the New Deal had turned a large number of citizens, through their tax returns, into producers of the data that made it possible to discuss “the economy.”¹⁰ Lehman Brothers had provided funds for the two economists to hire a team of statisticians to transcribe figures from the tax returns and translate them into measurements of the economy.¹¹

Although useful to a bank interested in the evidence that income taxes reduced investment, this kind of calculation alarmed many economists. One reviewer reported that the book had “grave defects,” in particular its “misplaced definiteness” and its use of “highly tentative savings statistics without adequate warnings to the reader.” “In view of these defects,” the review concluded, “it is to be hoped that the book will not have the popular following which its attractive form and lucid style and the manifest competence and honesty of its authors would otherwise deserve.”¹² The review’s author, Albert Gailord Hart, was a convert to Keynes’s ideas but was working on a study of uncertainty.

Unpopular with academic economists, this kind of “misplaced definite-

8. See Gerhard Colm and Fritz Lehman, *Economic Consequences of Recent American Tax Policy* (New York, 1938).

9. Will Lissner, “New Deal Policies Blamed for Slump,” *New York Times*, 23 Jan. 1938, query.nytimes.com/mem/archive/pdf?res=F30D12FC355A157A93C1AB78AD85F4C8385F9

10. Ibid. The number of individuals in the US filing tax returns more than doubled, from 3.7 million in 1933 to 7.7 million in 1939; see US Treasury Department, Bureau of Internal Revenue, *Statistics of Income for 1933* (Washington, D.C., 1935) and *Statistics of Income for 1939: Part 1* (Washington, D.C., 1942), www.irs.gov/uac/SOI-Tax-Stats-Archive.

11. The bank partner was Paul Mazur; see Lissner, “New Deal Policies Blamed for Slump.” On Colm’s relationship to Keynesianism, see Luca Fiorito and Matias Vernengo, “Gerhard Colm on John Maurice Clark’s *Economics of Planning Public Works*: An Unpublished Letter,” *Research in the History of Economic Thought and Methodology* 29A (2011): 83–93.

12. Albert Gailord Hart, review of *Economic Consequences of Recent American Tax Policy* by Colm and Lehmann, *Journal of Political Economy* 47 (June 1939): 438, 439. As stated earlier in the review: “The authors recognize that such a forecast is very insecure, particularly in view of the likelihood of lower interest rates. But their argument is garnished with a display of statistics, which in view of the shakiness of the individual items is more likely to lull the unwary into false security than to reinforce other arguments in the judgment of the critical” (p. 437).

ness” found a more effective way to shape opinion. The following year, in 1939, the US Bureau of the Budget was moved from the Commerce Department to the new executive office of the president. The lead author of the “defective” book, Gerhard Colm, was appointed as a chief economist in the bureau’s new fiscal division. There, he introduced into federal budget-making the novel methods of estimating national income accounts devised by Simon Kuznets. After the war, Colm joined the staff of President Harry Truman’s new Council of Economic Advisers (CEA). At the CEA, he transferred the new accounting methods used for the federal budget to the estimating of something called the nation’s economic budget. In the annual reports of the council, intended to educate the president and the public in economic forecasting and calculation, the work of formatting the economy proceeded. The “misplaced definiteness” of the economy acquired a larger definition.¹³

By around 1948, a decade after the introduction of national income accounting into the calculations of the federal budget, it was becoming more commonplace to refer to the economy. How should we understand the emergence of this new way of referring to collective life? Was the economy a new object or just an old name for things that already existed? Ultimately, neither option is satisfactory.

We can show how the economy appears to be a new object: a thing made up of aggregate price levels, wages, consumer spending, money supply, purchasing power, and savings, all of which could now be estimated, thanks to new business procedures, banking reports, household tax returns, and other forms of accounting. But the economy was more than just a set of aggregates. These accounts could be used to divide the collective world into a series of units, such as firms, banks, households, and government departments. The monetary interactions among all these accounting units could be estimated and the estimates then adjusted so that additions to one account equaled the subtractions from another. Instead of attempting to estimate only annual additions and subtractions, the accounts could be broken down into monthly reports, so that the movement of funds between units could be depicted as a dynamic process.¹⁴ These movements, from unit to unit, month by month, now appeared not just as aggregates but also as parts of an interacting system.

The accounting procedures that made this system visible and measur-

13. See Robert M. Collins, *The Business Response to Keynes, 1929–1964* (New York, 1981), p. 12.

14. See J. Tinbergen and J. B. D. Derksen, “Recent Experiments in Social Accounting: Flexible and Dynamic Budgets,” *Econometrica* 17 (July 1949): 195–204, and Carol S. Carson, “The History of the United States National Income and Product Accounts: The Development of an Analytic Tool,” *Review of Income and Wealth* 21 (June 1975): 153–81.

able were more than just forms of representation. They were new ways of raising revenue from a population, managing national finance, marketing and consuming goods, and earning livings. We could talk about the economy as a social construction. But the term *social construction* gets us caught in ontological and historical claims and counterclaims about what existed before the economy. It is easier to talk about the economy as an effect.¹⁵ By an effect, I mean the product of an iterative process of reference. The iteration was repetitive enough to create an appearance of permanence, but in its repetition it is also open to instability.

The effect of the economy provided not just a new object of government policy, in the way that governments had also become concerned with, for example, public health, or urban renewal, or social welfare. The economy provided a more pervasive effect, one that has since then escaped attention: a way to bring the future into government.

The appearance of the economy established a new temporal scheme in which past, present, and future were relocated. We can follow this shift—not perhaps on the scale at which Reinhart Koselleck, for example, speaks of modernity itself as a new regime of historicity—as a new prognostic structure in which a future was mobilized as a mode of adjudicating and managing claims in the present.¹⁶

The government of the present, as it was imagined through new forms of the future, would come to operate within a new metric of temporal change, the measurement of growth. This metric can be traced in novel methods of economic calculation, but establishing the process of measurement involved more than just devising calculative techniques. It required securing and stabilizing a number of sites that would support the new metrology. I will illustrate how this happened by first tracing one aspect of the process, the flow and regulation of energy supplies.

It is sometimes argued that the new energy regime of the modern era, based on fossil fuels that allowed the quantity of energy available in industrializing societies to increase exponentially, was an important source of the sudden acceleration of time and the unpredictability of futures. While the consumption of energy, in particular from oil, climbed rapidly from around the middle of the twentieth century, this consumption, paradoxically, contributed to an era in which the future became, for a while, part of a stable instrument for governing populations.

15. See Timothy Mitchell, "Society, Economy, and the State Effect," in *State/Culture: State Formation after the Cultural Turn*, ed. George Steinmetz (Ithaca, N.Y., 1999), pp. 76–97, and Judith Butler, "Performative Agency," *Journal of Cultural Economy* 3 (July 2010): 147–61.

16. The reference to Koselleck will be developed later. See also Enzo Traverso, whose work I am referencing here.

Power in the modern era is said to work through forms of reason, modes of calculation, and tactics of control that we sometimes refer to as governmentality: methods of power that take the population as their object and govern through the improvement of its health, wealth, and wellbeing. Michel Foucault argued that the spread of these methods leads to the “the governmentalization of the state.”¹⁷ If new forms of political reason and calculative practice emerging in the mid-twentieth century formed the economy as their object and introduced the future into government, perhaps we can refer to this mode of governmentality as economentality.

Economentality draws upon those processes that Koray Çalişkan and Michel Callon have called “economization:” the assembling of actions, devices, and fields that are characterized and formatted by economists and others as being economic.¹⁸ As Callon has long insisted, the discipline of economics plays an essential role in the work of economization, including the making of the economy. The aim here is not to shift attention from the economy to economization but to understand the making of the economy as an effect in which economization plays a part. Economics never merely represents the economic, but we can understand the work of economics only in its relation to other modes of government that draw upon the possibilities of economentality.¹⁹

2

Economentality emerged in a time of unprecedented labor struggles fought in the aftermath of World War II—unprecedented in the number of workers involved and the range of sites around the world where the battles occurred. Around 1948, one can trace the way in which governments responded to these struggles by following in a single year the making of new connections among America, Europe, and the Middle East.

On 10 May 1948, President Truman ordered the US army to seize control of the country’s railroads and place them under military operation. At the same time a federal district judge issued an injunction against the leaders of the railroad unions. The seizure and injunction prevented a

17. Michel Foucault, *Security, Territory, Population: Lectures at the Collège de France 1977–1978*, trans. Graham Burchell, ed. Michel Senellart (New York, 2007), p. 109.

18. See Koray Çalişkan and Michel Callon, “Economization, Part 1: Shifting Attention from the Economy towards Processes of Economization,” *Economy and Society* 38 (Aug. 2009): 369–98 and “Economization, Part 2: A Research Programme for the Study of Markets,” *Economy and Society* 39 (Feb. 2010): 1–32; and Callon, “Introduction: The Embeddedness of Economic Markets in Economics,” in *The Laws of the Markets*, ed. Callon (Oxford, 1998), pp. 1–57.

19. See Mitchell, “The Work of Economics: How a Discipline Makes Its World,” *European Journal of Sociology* 46 (Aug. 2005): 297–320.

national railway strike planned for the following morning. A month before, the courts had been used in a similar way to end a four-week strike by 400,000 coal miners seeking company retirement pensions.²⁰ The Taft-Hartley Act of the previous year gave courts a new power to prevent strikes, undoing some of the labor rights won during the New Deal. The act was a response to the largest wave of industrial action in US history. Starting in the country's oil refineries, which had been placed under military operation, the 1945–46 strikes had spread to railways, electrical workers, power companies, the steel industry, and automobile manufacturing. The federal government had deployed the armed forces to seize control of the oil refineries, then the coal mines (twice), and, on at least one previous occasion, the railways.²¹

The new Taft-Hartley powers could not be used against rail unions, which were governed under a separate legal regime, the Railway Labor Act. To get around this problem and prevent the new strike in May 1948, the court claimed a general power to prevent rail strikes. It justified this expanded power on the grounds that a nationwide rail stoppage would “imperil national health and safety” and obstruct “vital and necessary Government functions.” The court was empowered to act, it argued, in order to prevent this “irreparable injury” to the country.²² Justifying the peacetime use of military power by invoking the threat to national safety linked the government's domestic fight against the claims of organized workers to a new idiom of national security. The National Security Act of July 1947 inaugurated the remilitarization of government, setting up the Department of Defense, the Central Intelligence Agency, and the National Security Council. It seems only appropriate that President Truman signed the act into law aboard his presidential aircraft, a Douglas C-54 Skymaster nicknamed *The Sacred Cow*. Peacetime militarism was to be America's sacred cow, acquiring an increasing immunity from criticism. Peacetime militarism was now required, it was claimed, for the protection of Europe and, increasingly, to defend the oil fields of the Middle East. The novel idea that the energy resources of the Persian Gulf were important to the security of the United States was connected to the labor struggles at home.

In response to the postwar coal and railway strikes, electric power companies and railroad firms began to strengthen themselves against labor

20. Coal miners were not “protected” by the Taft-Hartley Act because the miners' union refused to sign its oath that leaders were not communists.

21. See Robert J. Donovan, *Conflict and Crisis: The Presidency of Harry S. Truman, 1945–1948* (Columbia, Mo., 1996), pp. 208–11.

22. Louis Stark, “Men Are Informed; Word Is Sent to Stay on Job as Leaders Bow at Last Minute,” *New York Times*, 11 May 1948, p. 4.

demands, thus weakening the expanded claims of popular democracy by developing an alternative source of energy, switching from coal to oil. Partly as a result, in 1948 the United States became for the first time in its history a net importer of oil, even though it was then producing 60 percent of the world's supply.²³

The US hoped to engineer a similar weakening of the labor movements in Europe. On the same day that the national railroad strike was defeated, across the Atlantic in Bordeaux the first ship carrying Marshall Plan aid began unloading its cargo, 8,800 tons of American wheat.²⁴ US aid was intended not just to rebuild Europe but to strengthen its business class against miners, railway workers, and other unionized forces even more powerful than those in the US. In Britain, France, and other parts of the continent, strikes led by coal miners and their allies in other unions were demanding an extension of the social and democratic rights won before and after the First World War, including a collective right to a role in the management or ownership of industry. For the American businessmen who ran the European Recovery Plan, as the Marshall Plan was formally known, US aid was to be used to weaken this left-wing threat to the corporate ownership and control of industry. Partly for this reason, the largest expenditure of Marshall Plan funds was not on US grain but on oil from the Middle East. The US subsidized the conversion of Europe's principal source of fossil fuel from coal to oil. The conversion was intended in part to weaken the coal miners of Europe and thus undermine the power of the Left.²⁵

Oil had a number of advantages as a source of energy that made it less vulnerable to the demands of labor. Simply by supplementing coal supplies, it weakened the ability of coal miners, in alliance with railwaymen and dockworkers, to shut down a country's carbon energy system. The weapon of the general strike—assembled with the building of coal, rail, and electric networks in the 1880s and used rapidly thereafter across the industrializing world to win battles for more democratic and egalitarian forms of collective life—was now dismantled. Oil could be raised to the surface and distributed using pumps and pipelines, so its production and distribution required fewer workers and was more difficult to interrupt

23. In 1948 the US accounted for 59 percent of total world production but consumed just over 60 percent. In other words, the net imports supplied barely 1 percent of consumption; see "Table Db190-197, Selected Mineral Fuels—Imports and Exports: 1867-2001," *Historical Statistics of the United States*, ed. Susan B. Carter et al., hsus.cambridge.org/HSUSWeb/search/searchTable.do?id=Db190-197, and *Twentieth Century Petroleum Statistics* (Dallas, 2009).

24. See Kenneth Campbell, "Marshall-Aid Ship Cheered in France: First 'Official' Vessel Brings 8,800 Tons of U.S. Wheat as Premier Praises ERP," *New York Times*, 11 May 1948, p. 20.

25. See Mitchell, *Carbon Democracy: Political Power in the Age of Oil* (New York, 2011), for an extended version of the argument summarized in this and the following paragraph.

with strike actions. Unlike coal, it was light enough to be moved easily across oceans. So regions that had previously industrialized using coal—building industries close to the source of energy and thus vulnerable to the interruption of local energy supplies—could now begin to outsource the supply of energy.

The postwar development of Middle Eastern oil can be viewed as an outsourcing of European industrial production. The outsourcing of manufacturing did not become significant for another two or three decades, following the development of containerized shipping, which allowed the advanced industrialized countries to begin importing large quantities of manufactured goods from East Asia. Energy, on the other hand, had already been containerized, as it were, ever since the development of the ocean-going oil tanker and the long-distance pipeline.

In 1947, workers in Saudi Arabia had begun constructing the Trans-Arabian pipeline, the world's largest pipeline at that time. The US companies that had purchased rights to produce oil in Saudi Arabia planned to pump the oil overland from the eastern shore of the country to the Haifa oil depot in Palestine, the terminus of an existing British-built pipeline from Iraq. Such pipelines and the associated tanker routes provided the infrastructure for moving the West's energy production offshore. In the process, they were also building a new infrastructure of democracy, in which struggles for a less precarious collective life would be waged over a more extended network.

3

In the same week of May 1948 that Truman was declaring military control of American railways, another military confrontation was culminating in a defeat at the Iraqi town of Fallujah, on the Euphrates River, forty miles west of Baghdad.

The Fallujah defeat was the last step in a struggle that had been building for two years. In June 1946, a strike at the Anglo-American-owned Iraq Petroleum Company fields in Kirkuk in June 1946—by oil workers demanding the right to a union, sickness and disability insurance, and a pension—had been crushed. A force of mounted policemen charged the meeting of several hundred workers gathered in the Gawupaghi Gardens outside the town, killing ten workers and injuring another twenty-seven. In early 1948 a series of student and worker strikes led to nationwide protests against the British-backed monarchy and the British-run oil company. This time, the oil workers focused their action not in the oil fields but at “the point of bifurcation of the Kirkûk–Haifa and the Kirkûk–Tripoli pipelines, the K3 pumping station near Hadîthah,” which they shut

down.²⁶ The stoppage lasted two weeks, until the company surrounded the site with machine guns and armored cars and cut off supplies of food. Unable to risk a repeat of the massacre at Gawupaghi, the strikers decided to march on Baghdad, more than 150 miles away. They set out on 12 May, the day after the defeat of the railroad strike in the US. After three days of marching, with increasing support along the way, they entered Fallujah and “fell into . . . a police trap.”²⁷ The oil workers were sent back to K3 and the strike leaders to prison.

Defeat for Iraqi oil workers was repeated in the breaking of oil strikes in Iran in the same period and later in Bahrain and Saudi Arabia. The Saudi oil workers demanded better pay and living conditions from the American oil company Aramco, the right to form a union and a political constitution from the government, and an end of extraterritorial privileges for the American oil company. In Egypt, as we will see, a wave of strikes was brought to an end in the same week as the oil workers’ protests in Iraq.²⁸

The year 1948 was marked by two events that would shape the region: one was the defeat of the Iraqi oil workers, a reversal for the kinds of popular forces based in oil extraction that lacked possibilities for disruptive, democratic collective action that coal workers in Europe had enjoyed; the second was a reconfiguring of colonial power, which previously worked through claims of protecting minorities but now was to be reoriented around security. Both, as it happens, lead to defeat at places named Fallujah.

4

In 1948, the new CEA in Washington published its second “Annual Report of the President to Congress.” Its inaugural report the previous year had contained the first official statistical representations of the American economy. But that report did not name its object as the economy and contained few uses of the new term, preferring to discuss the nation’s economic budget. But only a year later, in the 1948 report, one can see the

26. Hanna Batatu, *The Old Social Classes and the Revolutionary Movements of Iraq* (London, 2004), p. 622.

27. *Ibid.*, p. 627.

28. On oil worker protests in Iran, see Katayoun Shafiee, “Cracking Petroleum with Politics: Anglo-Persian Oil and the Socio-Technical Transformation of Iran, 1901–54” (PhD diss., New York University, 2010); on Saudi Arabia, see Robert Vitalis, *America’s Kingdom: Mythmaking on the Saudi Oil Frontier* (Stanford, Calif., 2007); on Bahrain, see Fuad I. Khuri, *Tribe and State in Bahrain: The Transformation of Social and Political Authority in an Arab State* (Chicago, 1980), pp. 194–217; and, on Egypt, see Joel Beinin and Zachary Lockman, *Workers on the Nile: Nationalism, Communism, Islam, and the Egyptian Working Class, 1882–1954* (Princeton, N.J., 1987).

familiarization of the idea of the economy, which begins to be used with increasing frequency. Five years later, in 1953, the report dropped the term *nation's economic budget*. The introduction to the annual accounts explains that they illuminate “the process of change and adjustment within the economy.” Their report warned, at the same time, that annual accounts could not capture the dynamic movement of this object. Their accounts were more like “snapshots taken at intervals than like a moving picture which shows the process of change.”²⁹

Historians have emphasized two points about the creation of the CEA. First, its creation marks an unprecedented influence of academic expertise within the executive office. For economists, Michael Bernstein suggests, the council was “the institutional zenith” for their service to the state.³⁰ Second, this expertise represents the emergence and triumph of what Robert Collins calls “economic growthmanship.”³¹ I want to propose two modifications to this story for understanding the new modes of government.

First, the CEA was set up not to allow economists into government but to keep them out.³² More precisely, it was intended to effect a separation of the powers, creating an arrangement analogous to the quasi-independence of the Federal Reserve, the Supreme Court, or the new Joint Chiefs of Staff, or analogous in another sense to the new realm of “national security” for which the Middle East served as an important reference point. The CEA would produce public economic knowledge outside the day-to-day contestations of political debate, contributing to the parallel effect of the economy as an object separate from the state that operated as a visible mechanism independent of the process of government.

Congress created the CEA in reaction against postwar proposals for a Full Employment Act, which would have established full employment as a collective right. Opponents of the right to employment inserted the plan for the council into the employment bill in order to weaken the influence of wartime economists in government and the mechanisms they had developed during the war for maximizing employment and controlling prices. The opponents hoped to undermine these government economists

29. Council of Economic Advisers, “The Economic Report of the President,” Jan. 1953, fraser.stlouisfed.org/docs/publications/ERP/1953/ERP_1953.pdf, p. 155.

30. Michael A. Bernstein, *A Perilous Progress: Economists and Public Purpose in Twentieth-Century America* (Princeton, N.J., 2004), p. 108.

31. See Collins, *More: The Politics of Economic Growth* (New York, 2000); hereafter abbreviated *M*.

32. See William J. Barber, *Designs within Disorder: Franklin D. Roosevelt, the Economists, and the Shaping of American Economic Policy, 1933–1945* (Cambridge, 1996). See also Roger B. Porter, “The Council of Economic Advisers,” in *Executive Leadership in Anglo-American Systems*, ed. Colin Campbell et al. (Pittsburgh, 1991), p. 189.

by giving a voice in Washington to academic economists; the council would express the views of specialists from outside the decision-making process. In contrast to economists hidden from view inside government departments, these academics-on-loan would be forced to make public their advice and the evidence on which it was based through an annual report to a new joint committee of Congress. By making economic calculation public, right-wing forces hoped to be able to expose its uncertainties and limit its influence. The CEA was to be a device for this making things public, for an “economic education” (starting with the education of the president). Its regular reports would help bring the economy into effect.

Second, economic expertise had often been concerned with problems of growth: the increase in population, the expansion of trade, a surfeit or shortage of natural resources, or inflation in the supply of money.³³ What was new in 1947–48 was not growthmanship but the object that would grow—not population, trade, resources, or wealth, but something less material and therefore more effective: the economy. The growth of the economy was not a question of the governance over resources or the management of national finance. It was a means of bringing the future into government—of governing populations through their futures.

Before the late 1940s, economists discussed growth as a question of periodic physical expansion. In the context of the New Deal, the war, and postwar restructuring of production, they saw growth as a question of putting idle plants back into service and creating jobs for those out of work. Such “expansion” was envisioned as part of a cyclical process of the growth and contraction of productive activity—the business cycle. Expansion was not an end in itself. Instead, the goal was to smooth out peaks and troughs, restricting expansions where necessary to decrease the severity of downturns and attempting to reduce bottlenecks in the supply of goods or labor that might hamper recovery from stagnation (see *M*, pp. 142–43).

By the 1930s, earlier prospects of a long-term expansion of material life had given way to arguments about a stagnation bought on by reaching the limits of physical growth. In a presidential campaign speech in 1932, Franklin D. Roosevelt warned that:

Our industrial plant is built; the problem just now is whether under existing conditions it is not overbuilt. Our last frontier has long since been reached, and there is practically no more free land. . . . We are not able to invite the immigration from Europe to share our endless

33. See Charles Maier, “The Politics of Productivity: Foundations of American International Economic Policy after World War II,” *International Organization* 31 (Autumn 1977): 607–33.

plenty. We are now providing a drab living for our own people. . . . Clearly, all this calls for a re-appraisal of values. A mere builder of more industrial plants, a creator of more railroad systems, an organizer of more corporations, is as likely to be a danger as a help. . . . Our task now is not discovery or exploitation of natural resources, or necessarily producing more goods. It is the soberer, less dramatic business of administering resources and plants already in hand . . . of adapting existing economic organizations to the service of the people. [Quoted in *M*, p. 5]

In 1938, the same views were expressed by Alvin Hansen in his address as president of the American Economic Association, as the doctrine of secular stagnation. A decade later, the postwar effect of the economy and its growth replaced this process of secular expansion and stagnation of commercial life with a politics oriented around a new object somehow capable, it seemed, of perpetual growth.

What was the effect of the economy good for? Part of the answer is that it allowed a mode of government that both represented opposing social forces and indicated the means of bringing these opposites into balance. This was the chief method and purpose of the CEA reports: to represent and balance the claims of business and labor.³⁴ Exposed to the changing metrics of the economy, businessmen would be pressured to consider the impact of excessive price increases, and workers would be forced to moderate wage demands. A third party, the bankers, would see the effect of directing funds towards consumption versus investment.

The economy was a device for achieving this balance by deploying the future, calculated in terms of the changing movements of funds among economic units. Rival political forces would now see how different demands and choices affected the future balance. The economy would embed people's political lives in the future by bringing them to calculate according to its representation. It would locate them in relation to a future formed in a particular way, as a balance, or trade-off, between forces now inscribed as equivalents in the structure of national accounts, with wage earners/consumers on one side and business and banking on the other.

Until this point, economists had typically been suspicious of the work of forecasting. It was an unpredictable and therefore dangerous art, whose excesses and failures were said to be visible in the example of Soviet-style planning. Writing about "the crises of confidence which afflict the economic life of the modern world," John Maynard Keynes had pointed out

34. See Council of Economic Advisers, "The Economic Report of the President," Jan. 1948, fraser.stlouisfed.org/docs/publications/ERP/1948/ERP_1948_January.pdf, p. 78.

that “our basis of knowledge for estimating the yield ten years hence of a railway, a copper mine, a textile factory, the goodwill of a patent medicine, an Atlantic liner, a building in the City of London amounts to little and sometimes to nothing.” He did not believe that economic calculation could overcome “the dark forces of time and ignorance which envelop our future.”³⁵ This fear of unknowable temporal forces could now give way to a calculated future, projected with increasing confidence onto the politics of the present.

To govern through the future was not just a question of calculating the new circulations of funds that were to be known as Gross National Product (GNP) (and later the Gross Domestic Product [GDP]) or discussing the economy as a political object. We can trace two more specific innovations that illustrate in detail the kind of work required to produce and locate the future.

The first example is the price deflator or the method of adjusting figures to account for inflation so that comparisons could be made over a wide span of years. The GNP was an annual figure. Like a company’s books, it required an arbitrary starting and ending point, creating a unit of time within which everything had to balance, generating a total—a fixed quantity manufactured out of the endless circulation of payments between economic entities. The total produced from within one unit of time could then be compared to the next, just as a firm compares its quarterly or annual profits. But unlike those reporting company profits, those calculating GDP wished to make it possible to compare the total from one year not just to the preceding or following year but across several years or even decades. This extended temporal sequence required a method of adjusting the numbers to allow for the declining purchasing power of money or the phenomenon of price inflation.

Inflation was one of those words borrowed by economists from nineteenth-century physics; it was used to refer to the mechanical act of pumping additional supplies of money into the currency system. It was now a term that could refer to the new national-level aggregates whose measurement was taking shape as the economy. The staff of the government budget office initially refused the request to calculate the rate of inflation in prices, arguing that gathering representative data on the prices of numerous commodities at regular intervals and manipulating the figures to calculate an aggregate annual inflation rate was far too complex and

35. John Maynard Keynes, *The General Theory of Employment, Interest, and Money* (New York, 1964), pp. 161, 149–50, 155. See *M*.

costly an operation. Eventually, however, the usefulness of the deflator in constructing the economy overcame these objections.

The deflator made it possible to measure the change in GDP not just from one year to the next but over a sequence of years or decades. This extended measurement made visible a dynamic process—the growth of the economy. With adjustments for inflation, it was now possible to estimate totals for the GNP of the United States for every year back to 1875. The estimates suggested that the American economy had been growing, with ups and downs, at a rate of 3.75 percent per year.

A second innovation came in the way economists pictured growth. In its annual reports, the CEA began portraying changes in the nation's "economic budget" and later its economy with a chart. The vertical axis showed the level of GDP and the horizontal axis showed the succession of years. The phenomenon of growth, portrayed as the increase in GDP, formed a line ascending from left to right across the surface of the chart. The line started in the past, moved through the present, and was projected forwards into the future. The visualization was intended to educate the public, encouraging workers and employers to act in relation to this projected future. Unreasonable political demands, it could be shown, especially the demand of workers for higher wages based on an increased share of revenues, rather than on increases in their own productivity, would threaten to throw the line off its path.

However, with production growing at close to 4 percent a year, this line that was to rule people's lives was not straight. Drawn on a chart, it formed an exponential curve. It started as a gently rising slope but gathered height rapidly and before long would acquire a slope that was almost vertical, with values approaching infinity.

The problem of the exponential curve was twofold. First, with the line moving close to vertical, the beneficial effect of minor adjustments in the demands of different political forces could not easily be made visible on the graph. Second, if the future was an accelerating curve—a line of exponential growth—how could it be made an instrument of discipline and control? It appeared out of control.

Until now, this had been the problem not just with the drawing of graphs but with the future itself. The modern experience of growth had not previously offered a point of stability or a focus of control. Geometric rates of change always appeared unsustainable. Thomas Malthus's *Essay on the Principle of Population*, first published in 1798, was the best-known expression of this problem. But many other nineteenth-century political economists carried out similar calculations with the same resulting alarm about the future. William Jevons, one of the architects of marginal utility theory

in the 1870s, had abandoned the question of growth after completing a report on Britain's coal reserves, published in 1865. The study predicted that the exponential growth in Britain's mining and consumption of coal would lead to a peak in coal production within about fifty years and then an accelerating decline. The prediction proved accurate, with the peak arriving in 1913. By the early twentieth century, there was a widespread preoccupation among economists with the consequences of geometric growth, including the exhaustion of natural resources.

This concern was found not just among political economists. Koselleck argues that in the modern era geometric rates of change defined the very experience of modernity. Modernity was encountered, he suggests, in terms of "a future that transcended the hitherto predictable" because of the phenomenon of the ever increasing speed of change.³⁶ The future, in other words, was experienced in the present as this lived sensation of acceleration. The experience created a rupture with the past, which now had to be refigured as an inaccessible "tradition" because earlier history "might not count against the possible otherness of the future."³⁷ The new horizons of expectation caused a repositioning, as it were, of the relative locations of past and future.

In the early decades of the twentieth century, writers continued to associate the experience of modernity with accelerating change and thus unpredictable futures. Very often the experience was related to the "natural energies" that humans could now exploit. "One phase of the workings of a technological age, with its unprecedented command of natural energies, . . . needs explicit attention," John Dewey wrote in *The Public and Its Problems* (1927). "The older publics, in being local communities, largely homogeneous with one another, were also, as the phrase goes, static." Dewey argued that "the mania for motion and speed is a symptom of the restless instability of social life, and it operates to intensify the causes from which it springs. Steel replaces wood and masonry for buildings; ferroconcrete modifies steel, and some invention may work a further revolution."³⁸

The later, postwar visions of development presented by men like Adriano Daninos, the promoter of the scheme to build the Aswan Dam, had not yet taken shape. On the contrary, in the interwar period mammoth infrastructure projects could exemplify the speed of change that made reliable calculations of the future impossible to carry out. The US Congress

36. Reinhart Koselleck, *Futures Past: On the Semantics of Historical Time*, trans. Keith Tribe (New York, 2004), p. 22.

37. *Ibid.*, p. 267.

38. John Dewey, *The Public and Its Problems: An Essay in Political Inquiry*, ed. Melvin L. Rogers (University Park, Penn., 2012), p. 117.

spent more than a dozen years debating what to do with the stalled project to build a giant dam on the Tennessee River at Muscle Shoals, Alabama, before devising the scheme for the Tennessee Valley Authority that was to inspire Daninos and others as a model for postwar visions of integrated development. For more than a decade, the problem of the dam occupied more time in Congress than any other issue.³⁹ For Dewey, the failure at Muscle Shoals, with its associated nitrate plants built to produce munitions and fertilizer, epitomized not a mastery of the future as a program of economic and material growth but the way in which proliferating sources of energy made new projects almost immediately redundant. “New methods,” he wrote, “have already made antiquated the supposed need of great accumulation of water power.”⁴⁰

For other writers, the motor of acceleration was identified as money. Writing about the mental experience of what he called “money economy,” Georg Simmel explored “the accelerating effects of an increase in the supply of money on the development of the economic–psychic process.”⁴¹ No wonder there was a suspicion of financial forecasting as unreliable and dangerous.

The example of Soviet central planning might have offered an alternative way to control the future, but it appeared no better. As a centerpiece of the 1929 Five Year Plan for the Development of the National Economy, the Soviet government hired the Chicago engineering firm of Henry Freyn and Company to design a vast integrated iron and steel complex at Magnitogorsk, the largest single venture in Soviet planning.⁴² The design reproduced on a gargantuan scale the plant that Freyn’s engineers had designed for the US Steel Company at Gary, Indiana. This was crash mobilization, on the German military model, creating “a rallying point for a technologically perfected future.”⁴³ Planning meant the chaotic multiplication of factories, repeated improvisation, a future of proliferating numerical quantities, and impossible annual targets. Soviet central planning inspired governments around the world with its ambition and speed, but its deployment of the future calculated as the rapid multiplication of

39. See Norman Wengert, “Antecedents of TVA: The Legislative History of Muscle Shoals,” *Agricultural History* 26 (Oct. 1952): 141–47.

40. Dewey, *The Public and Its Problems*, p. 117.

41. Georg Simmel, *The Philosophy of Money*, trans. Koethe Mengelberg, Tom Bottomore, and David Frisbee (New York, 1978), p. 542.

42. Quoted in Stephen Kotkin, *Magnetic Mountain: Stalinism as a Civilization* (Berkeley, 1997), p. 30.

43. *Ibid.*, p. 32. See also Alan M. Ball, *Imagining America: Influences and Images in Twentieth-Century Russia* (New York, 2003), pp. 119–43.

physical plant and material output rendered the present more rather than less chaotic.

It is worth remembering that Keynes, one of those who followed the Soviet experiment, was not a theorist of economic growth. He imagined the period of expansion required to escape from the downward spiral of economic depression as a limited period of temporary acceleration, leading to a future steady state. For Keynes, growth was not a metric of success but a potentially destabilizing force.⁴⁴

How, given all this previous experience, was it possible to turn a pattern of exponential growth into a stabilizing effect? One small but significant solution to the problem was a new method of representation, the log plot. In drawing charts of the growth of this new object, the economy, one could plot the growth of GDP over time not against a linear vertical scale but with the scale adjusted to show the rate of change—in other words, by using a logarithmic scale in which the intervals on the vertical axis represent ratios. This trick turns an exponential curve into a straight line. An economy growing at 3.75 percent per year can then be represented as a steady line, rising gently and uniformly across the page. What is steady is not the process of increase but its rate. The effect of small changes in political demands or economic decisions could now be clearly projected on paper; and the future no longer appeared as an unstoppable acceleration.

Through such material inscriptions, the economy emerged as a nonmaterial object, a set of calculations that converted the accelerating growth of modernity into an apparently stable future. In ways like this and many others, the economy, perhaps just for two or three decades, made the future an instrument of government.

5

The log plot, although useful, was far from the only device to make the future governable. The calculation of GDP—and what that excluded—was itself important. But so too were those workers in Iraq and other countries of the Middle East. They helped in two ways.

First, as I have suggested, the outsourcing of energy production to the Middle East helped break the postwar wave of labor protests in North America and even more so in Europe, where organized workers were demanding a more far-reaching reconfiguration of claims to collective wealth. Coal miners in alliance with dockers and railway workers had played a critical role in bringing popular democracy and vastly more egal-

44. See for example Keynes, "Economic Possibilities for Our Grandchildren (1930)," *Essays in Persuasion* (New York, 1963), pp. 358–73.

itarian forms of life to the West. They had engineered an unprecedented redistribution of wealth in the interwar and wartime decades.⁴⁵ From now on, however, increases in the income of workers were to come not from a redistribution of profits but from the steadily rising line. Pipelines and graph lines would work together. If the rate of growth leveled off or dropped back, of course, the income of most people would “naturally” stagnate or decline.

Second, productivity could grow, and thus incomes increase, thanks to oil, which for a quarter century after 1945 increased in supply and gradually declined in price. Oil companies tried hard to restrict supply and fix the price of Middle Eastern oil supplied to Europe at the much higher price of oil produced in the US—a price set by state-level production quotas designed to maintain the scarcity of oil and thus extraordinary levels of profit. But these restrictions were never adequate, and there was a constant pressure from the governments in oil-producing countries for increased output or an increased share of revenues, a pressure the oil companies found it increasingly difficult to manage. As a result, the price of oil gradually declined. By 1970, oil’s price in real terms had been declining in every decade since 1920. Thus for several decades, the supply of energy seemed unlimited and its costs, for many purposes, negligible. If the economy appeared capable of unlimited growth, this was for practical reasons of the mid-twentieth-century energy regime.

One could also explore how the new calculation of growth in an economy solved the problem of peacetime military spending. Before the making of the economy, it was difficult to imagine how the decision to build a permanently militarized society after 1947–48 was not somehow at the expense of improvements in welfare and wages for the majority. Those points of vulnerability in the Middle East, where US national security was soon deemed to be especially at risk, formed part of this new political-economic effect.

Governing people through their future also became a device for managing populations in the formerly colonized world. In 1940 Colin Clark, who had developed the methods used in Britain for the calculation of national income, published the first estimates of national incomes everywhere. His calculations of the degree of inequality between rich and poor countries caused a shock.⁴⁶ But this generalization and repetition of the effect of the economy also raised questions. Simon Kuznets, for example,

45. See Mitchell, *Carbon Democracy*.

46. See Daniel Speich, “Travelling with the GDP through Early Development Economics’ History” and Mary S. Morgan, “‘On a Mission’ with Mutable Mobiles,” *Working Papers on the Nature of Evidence: How Well Do ‘Facts’ Travel?* eprints.lse.ac.uk/22501/, eprints.lse.ac.uk/22500/

had not expected his methods of estimating GDP to be used to produce simple intercountry comparisons. The statistics implied that every country had an equivalent economy, a similar arrangement of monetarized relations, which could be compared and ranked. However, even if every country was said to have an economy, producing this effect in what were now to be called underdeveloped areas required different methods and offered different political possibilities. One of the most significant of these possibilities was that industrialized states could attempt to govern not only their own populations but also relations with the rest of the world through their futures.

In international relations, the future entered government unexpectedly. Harry Truman announced the arrival of the era of “development” in his January 1949 inaugural address.⁴⁷ The announcement was an afterthought. Asked to formulate a vision of the future to guide the president’s second term, officials in the State Department came up with three points: support for the UN, the Marshall Plan, and NATO. But these were existing policies that the president had been discussing throughout the election campaign in the fall of 1948. An assistant for Truman told the State Department that he needed a fourth point, something “that’s just a bit original.” The men at State found it difficult to imagine the future. “One heard a great deal of the need for long-range thinking and long-range planning in those days, and the State Department men tried to organize themselves for it,” one of them later explained. But “their efforts at planning generally bogged down in topical questions, such as what to do with the Italian cable under the Atlantic, or what price to pay for tin.”⁴⁸

An official who had been helping with technical assistance programs in Latin America suggested that such aid could be offered to other parts of the world. The idea was hastily inserted in the speech. Truman announced what became known as Point Four (there had been no time to name the idea): “a bold new program for making the benefits of our scientific advances and industrial progress available for the improvement and growth of underdeveloped areas.”⁴⁹ The postwar US politics of development emerged not as an imperial vision but as an afterthought.

As with the device of the national economy at home, the new politics of

47. See Arturo Escobar, *Encountering Development: The Making and Unmaking of the Third World* (Princeton, N.J., 1995).

48. Louis J. Halle, “On Teaching International Relations,” *Virginia Quarterly Review* 40 (Winter 1964): 16, 17, 12–13. See also Gilbert Rist, *History of Development: From Western Origins to Global Faith*, trans. Patrick Camiller (New York, 2008), p. 70.

49. Harry S. Truman, “Truman’s Inaugural Address,” 20 Jan. 1949, www.trumanlibrary.org/whistlestop/50yr_archive/inagural20jan1949.htm

development represented a novel way of bringing the future into government. The vision was not one of how America would share its wealth with the world or support the rights of oil workers in the Middle East trying to create more equitable forms of life. In March 1948 the UN Conference on Trade and Employment in Havana, Cuba, had adopted the charter of an International Trade Organization. Forming a third body alongside the International Monetary Fund and the World Bank, the organization was intended to govern international trade, including trade in oil and other commodities. Under the agreement, oil company cartels and other private trade arrangements would be replaced with publicly regulated agreements, and international investment and trade would be governed by principles of labor rights and the right to full employment. India and other countries from the south hoped to use the new organization to redirect a greater share of the profits from production and trade in goods to the producer countries. There were concurrent demands for a Marshall Plan for such countries to return some of those profits in the form of material assistance. The US opposed such proposals, and the agreement to create the International Trade Organization collapsed after the US Congress refused to ratify its charter.⁵⁰

As a substitute for the international regulation of trade and the extension of labor rights to people like the oil workers of Iraq, Truman's speech mobilized the future, now understood as the development or growth of national economies. The contribution the US would make was not material assistance or support for labor rights but something unlimited: technical knowledge. "The material resources which we can afford to use for assistance of other peoples are limited," Truman explained. The "interest of the people whose resources and whose labor go into these developments," moreover, had to be "balanced" by "guarantees to the investor." In contrast to these necessary limitations, "our imponderable resources in technical knowledge are constantly growing and are inexhaustible."⁵¹ There was no capital to spare, there would be no Marshall Plan for countries such as Iran, Egypt, or India, and no support for the right to unionize or act collectively to improve terms of employment and exchange. In place of material resources and the labor rights that had created widespread affluence in the West, the US would offer knowhow and technical advice. The knowhow would be offered in various fields but increasingly in one

50. See Daniel Drache, "The Short but Significant Life of the International Trade Organization: Lessons for Our Time," Centre for the Study of Globalisation, University of Warwick, Nov. 2000, www2.warwick.ac.uk/fac/soc/csgr/. The text of the Havana Charter is available at www.wto.org/english/docs_e/legal_e/havana_e.pdf

51. Truman, "Truman's Inaugural Address."

main form: economic calculation. A knowhow that, in contrast to limited material resources, was inexhaustible.

6

Let us return to the Arab world in May 1948, where the protests of Iraqi oil workers had ended in defeat at Fallujah. As it happens, the town gave its name to a second setback that summer, an event in Faluja, Palestine. A village in the District of Gaza, lying about halfway between the town of Gaza on the coast and the hill town of Hebron, Faluja was named after a shrine the villagers had built to a fourteenth-century Sufi master from Iraq, al-Shahab al-Din al-Faluji, and thus indirectly after the Iraqi town.⁵² The same week of May 1948 was a fateful one for Palestine.

Britain had announced the year before that Friday, 14 May, would be the final day of its occupation of Palestine. The UN had proposed a scheme to partition the country between the Zionist settlers, who were concentrated in half a dozen of the largest towns and a number of agricultural settlements, and the indigenous population, who inhabited every region of the country and outnumbered the immigrant Jewish population by about two to one. But no one had agreed to implement the partition or organize the removal of the Palestinian people from their towns and villages, as the plan for ethnic separation apparently required. While railway workers in the US were forced back to work by the Truman government, and the mass oil strike in Iraq met defeat, Palestinians faced a larger calamity.

By the time the British departed, military actions and terror campaigns carried out by the well-organized Zionist forces had already driven as many as 400,000 Palestinians from their homes.⁵³ On the following day, 15 May, Egyptian soldiers entered Palestine from the south, while a rival army from Transjordan (following secret talks with the Zionist leadership) took control of the western side of the Jordan River. The Egyptians initially held the southern parts of the country, but when the Zionist forces later broke through their lines into the south, an Egyptian brigade was trapped in a pocket of territory at Faluja, the village linking what would become the West Bank and the Gaza Strip. In the armistice negotiations four months later, Egypt was forced to abandon the Faluja Pocket, as the area became

52. See Walid Khalidi, *All That Remains: The Palestinian Villages Occupied and Depopulated by Israel in 1948* (Washington, D.C., 1992), p. 95.

53. For details, see Rashid Khalidi, *The Iron Cage: The Story of the Palestinian Struggle for Statehood* (Boston, 2006); Nur Masalha, *Expulsion of the Palestinians: The Concept of "Transfer" in Zionist Political Thought, 1882–1948* (Washington, D. C., 1992); Ilan Pappé, *The Ethnic Cleansing of Palestine* (Oxford, 2006); Norman Finkelstein, *Image and Reality of the Israel-Palestine Conflict* (New York, 2003); and Ahmad H. Sa'idi and Lila Abu-Lughod, *Nakba: Palestine, 1948, and the Claims of Memory* (New York, 2007).

known, although the partition proposal of 1947 and a revised UN plan in the summer of 1948 had called for retaining that area as part of the rump Palestinian state. In exchange for Egypt withdrawing its besieged force, the government of the new Israeli state agreed to leave the area's Palestinian population in place. Within weeks of the agreement, the villagers of Faluja were forced out, the population link between the coastal strip and the hills was severed, and the way cleared for the Israeli settlement of southern Palestine.

The two Faluja defeats of 1948, in Iraq and Palestine, mark two sides of a connected process. The Egyptian defeat consolidated the Zionist control of southern Palestine and the confinement of most of the Palestinians who managed to remain in the country within two enclaves, the West Bank and the Gaza Strip. Britain had supported Zionist settlement in part because the creation of a European settler minority established a point of vulnerability that required an imperial presence for its protection. After World War II, Britain could no longer afford to run this old kind of protectorate, based on the need for armed protection of European settlers. And the settlers themselves, strengthened by their own wartime militarization and by a competition between the US and the USSR to support them, had helped force the British out. After 1948, imperial protection took new forms, based on new vulnerabilities. Expanding oil production enabled the rise of labor organizing in Iraq, Iran, and later in Arabia, but it also allowed the US into the region as the protector of regimes that would police and prevent labor's organization. The attempted removal of Palestinian society would create another vulnerability that Washington was later to take advantage of as protector of the state of Israel.

In Egypt, a labor movement that was larger than those of the Gulf states and had a long history of political action had organized a wave of strikes and industrial protests in 1947–48. The strikes began in the large textile mills and other industrial enterprises, then spread to the Suez Canal operators, the oil refinery at Suez, petroleum distributors, and many others. The emergency in Palestine in April and May 1948 allowed the government to impose martial law, break the strikes, and imprison thousands of leading opponents of the regime.⁵⁴

The defeat of the army in Palestine galvanized a group of junior Egyptian army officers who formed a secret organization, the Free Officers, to combat the corruption of the country's military and political leadership and support a popular movement to end Britain's continuing imperial presence in Egypt. The leader of the group, Gamal Abdel Nasser, was one

54. See Beinun and Lockman, *Workers on the Nile*, pp. 355–62.

of those who had been trapped for four months in the Faluja Pocket. After overthrowing the British-supported monarchy in July 1952, the Free Officers introduced a modest program to redistribute the royal estates and other very large landholdings to the landless. These policies met resistance from the old order, with its base among large landowners, while leftist groups demanded more radical change. In March 1954, a showdown with opponents culminated in a general strike organized by pro-Nasser unions—transport workers, bank employees, and the workers at Suez. The show of strength enabled Nasser to defeat opposition from the Right to the Left. To extend its popular support, the regime declared a new era of revolution and adopted a grand plan to remake Egyptian material and collective life. The revolution, however, was to operate not through a further redistribution of land in the Nile Valley but through a scheme to expand the valley by building the High Dam at Aswan.⁵⁵

The story of the World Bank's offer to help fund the Aswan project is well known.⁵⁶ Having lost its mission of funding postwar reconstruction in Europe to the Marshall Plan, the bank seized the opportunity to demonstrate its transformation from a financial institution into what could now be called a development agency by offering to finance the largest rock-fill dam in the world. The bank even contemplated using the dam as an instrument for solving the Palestine question; bringing irrigation water under the Suez Canal to northern Sinai and settling Palestine refugees there might have allowed the United Nations Relief and Works Agency (UNRWA), the agency set up to provide relief for the refugees, to contribute to the cost of the dam.⁵⁷ But the Israelis had other plans for Sinai. In February 1955 Israel launched an attack on the Egyptian forces in Gaza, taking the first step to capture the remainder of southern Palestine and seize Sinai, occupying Egyptian territory as far as Suez.

Meanwhile, the British were developing plans for a military counter-coup in Egypt and the assassination of Nasser in order to reinstall a neo-colonial regime. The plotters within MI6 had difficulties with the design of

55. See *ibid.*, and Joel Gordon, *Nasser's Blessed Movement: Egypt's Free Officers and the July Revolution* (Oxford, 1992), pp. 127–74, 192.

56. See Staples, *The Birth of Development*, and Harold N. Graves, Jr., "The Bank as International Mediator: Three Episodes," in Edward S. Mason and Robert E. Asher, *The World Bank since Bretton Woods* (Washington, D.C., 1973), pp. 595–646.

57. F. Dorsey Stephens, letter to Joseph Rudinsky, Beirut, 17 Feb. 1956, enclosing memorandum by Leslie Carver recording a meeting with Eugene Black, Cairo, 3–4 Feb. 1956, documents relating to the *Report on the Agricultural Aspects of the Sudd el Aali Project (High Aswan Dam Project)*, WB 1589793, World Bank Group Archives, Washington, D. C.

the assassination devices—a Remington shaver fitted with explosives failed to operate properly—and in any case the plot was uncovered.⁵⁸

The Americans decided that there was an easier way to deal with the threat of a nationalist government in Egypt. Rather than eliminating the president, they would kill the mechanism that was supposed to increase his power, the construction of the dam. In July 1956, Washington cancelled its participation in the funding for the dam, surprising the World Bank and leaving it unable to proceed with the loan.⁵⁹ Like the Remington shaver, however, the device failed to destroy its target. Cancellation of the loan offered Nasser the opportunity to nationalize the Suez Canal Company, whose revenues had been originally discussed as the means to finance the dam.

Britain responded by putting aside its assassination plans and supporting the Israeli scheme, already backed by the French, to invade Egypt, take the canal, and overthrow Nasser's government by force. Yet the Anglo-French-Israeli invasion quickly exposed the limits of neocolonial force. The invaders tried to portray the seizing of Sinai and the canal as a police action that secured a vital communication route, an Egyptian version of Truman's seizure of the US railways eight years earlier. But British war planners also grasped the limits of military power, and they hoped to enlist an economic device to assist the military operation: a form of calculation operating within ordinary Egyptian life.

The British would not attempt to invade Cairo by force. They planned to land troops at the canal and destabilize the country by destroying railways, power stations, and oil refineries. The economic consequences of this destruction of the country's energy infrastructure, the military planners argued, would create public support for a coup. Since "the materially-minded Egyptian civilian is unlikely long to sustain the rigours of wartime or the actual experience of battle," they reasoned, "it seems less likely to be a question of 'if there is a collapse of public . . . support for the Regime' as 'how quickly that will take place.'"⁶⁰ Backed by this military-engineered economic force, Nasser's generals would remove him from power and the British would occupy Cairo without a battle.

58. See W. Scott Lucas and Alistair Morey, "The Hidden 'Alliance': The CIA and MI6 before and after Suez," in *American-British-Canadian Intelligence Relations, 1939–2000*, ed. David Stafford and Rhodri Jeffreys-Jones (Portland, Ore., 2000), pp. 95–120. See also Peter Wright and Paul Greengrass, *Spycatcher* (New York, 1987), chap. 8, and Keith Kyle, *Suez: Britain's End of Empire in the Middle East* (London, 2002).

59. On the surprise to the bank, see Robert Okie, interview by Sir William Iliff, 12 Aug. 1961, www-wds.worldbank.org/external/default/WDSContentServer/WDS/IB/2013/07/08/000356161_20130708153748/Rendered/PDF/790470TRN0l1f0gust0120and016001961.pdf, pp. 32–33.

60. Quoted in Lucas and Morey, "The Hidden 'Alliance,'" p. 107.

The US refused to support the invasion, so the British never had the chance to try provoking these forces of local economic calculation. The Americans, having decided that deploying economic calculation on a larger scale was more effective, thought depriving Egypt of development assistance was a more effective weapon. But where the new methods of economentality had offered an alternative to military action at home, the attempt to impose the discipline of collective economic calculation in Egypt had failed to achieve results.

The failure of the US plan to discipline Egypt through the development of its economy began with the fact that Egypt did not need the World Bank's funds. Initial plans for the dam had been backed by a consortium of German engineering firms. The Germans brought British firms on board as a way to access funding; Egypt had large foreign reserves, sterling balances built up in London from goods and services provided to Britain during the Second World War. British firms lobbied London to release the funds and tried to get the release conditional on building a dam through the Anglo-German consortium.⁶¹ To engineering firms, desperate for business in a depressed postwar Europe, the dam was not a scheme to store up and divert the Nile so much as a scheme to divert the sterling funds in London, via a detour through southern Egypt, into company revenue. An alternative source of hard-currency funds was the shipping tolls from traffic passing through the Suez Canal, which totaled twelve to fifteen million sterling per year and were increasing rapidly as oil shipments grew. Two-thirds of this income went from the shipping countries directly into Paris and London. But by 1968, about the time the delayed interest on a loan for the dam might come due, the canal would revert to Egyptian ownership.⁶²

In fact, Egypt arguably did not even need the dam. This was probably the view of the bank's leading development economist in the early 1950s, Paul Rosenstein-Rodan.⁶³ He had argued against developing "backward regions" through investment in infrastructure such as dams, canals, and hydroelectric power stations, which required imports of construction machinery, turbines, and other expensive capital goods. Such countries, he believed, should focus on small-scale, labor-intensive manufacturing. This had to be done extensively enough to take advantage of the social profit

61. See United Kingdom, Board of Trade, UK High Commission, Bonn (R.W. Jackling) to Mackenzie, BoT, 15 Apr. 1955, National Archives of the UK, Public Record Office, BT, 213/44, 1955, "EGYPT : Development Schemes – High Aswan Dam – Sterling Releases."

62. See Gregh, "EGYPT - Visit of Mr. J. Georges-Picot."

63. On Rosenstein-Rodan's disagreements with bank policy, see Paul Rosenstein-Rodan, interview by R. Olivier, World Bank / IFC Archives, Oral History Program, siteresources.worldbank.org/EXTARCHIVES/Resources/rosenstein-rodan_transcriptt.pdf. Rosenstein-Rodan worked at the bank from 1947 to 1953.

that arises from the clustering of interrelated small firms, producing wage earners who would create a demand for goods produced by other wage earners—the kind of complementary effects at the level of the “national economy” that individual investors, figuring profit at the level of the enterprise, were unable to calculate.⁶⁴

But the bank could not fund industrialization. It had to raise investment capital by selling bonds. To obtain funds from Wall Street, it needed large, measurable, fundable things.⁶⁵ Agriculture and small industry were too localized, too small, and too dependent on forms of social profit for bankers to calculate rates of return and risks. Large infrastructure projects such as dams, roads, and power plants produced future returns that could be calculated at the level of the economy rather than the enterprise. And because this calculable future, the economy, was now the responsibility of government, a sovereign state could be made liable for the loans, reducing Wall Street’s risks.

When the bank became involved in the funding of the dam, it performed its own calculation of the costs of the project. By doing so, it introduced a completely different calculus. The construction costs, first of all, comprised not just the work of building the dam and supplying turbines. The project needed a nationwide electrical grid and water distribution system. But, more importantly, the costs had to calculate the future. These included not just interest payments on the loan, which were relatively simple to determine, but the future effects of the money spent on construction of the dam and its associated infrastructure. As wages for construction workers were turned into forms of consumption, demand would rise, prices would climb, and the currency would be devalued. The cost of imports, in turn, would increase, and the cost of international borrowing would go up. All these interconnected future costs could now be brought into view by the measurement and calculation of the economy.

Given these vastly higher costs, the bank calculated that the dam would consume the entire disposable spending of the Egyptian government for the period of the loan. So, in exchange for the loan, the bank proposed that the government would have to submit its finances to international inspection and control for the fifteen years or more of loan repayment. The scale of the dam created a project that could be monitored at the level of the calculation of the national economy. Building the dam required putting in

64. Rosenstein-Rodan, “Problems of Industrialisation of Eastern and South-Eastern Europe,” *Economic Journal* 53 (June–Sept. 1943): 203.

65. See Michele Alacevich, *The Political Economy of the World Bank: The Early Years*, trans. pub. (Palo Alto, Calif., 2009), pp. 144–45.

place a future, an economy, through which Egypt would now be governed. The Nasser government refused to accept this future.

7

Around 1948, a new future arrived. It was brought into being as a specific set of techniques for governing relations in the present in order to manage the economy understood not just as a numerical totality but as a dynamic set of forces caught in snapshot and under management. The economy was not simply a new object of government but rather an effect: the product of a series of iterated calculations.

Yet the effect depended on more than just new calculative techniques. As an example, we have seen how the economization of domestic political life in industrialized countries depended upon the outsourcing of energy, a change brought about partly in response to the efforts of organized workers in the postwar years to claim a different collective future. In turn, the decreasing cost of energy, in particular of oil from the Middle East, helped generate the effect of the economy as an object capable of unlimited growth. So the calculative practices of the economy depended on maintaining forms of autocratic and inegalitarian rule in the Middle East. The postwar economentality of the West, as a mode of government, was an effect manufactured partly in the Middle East.

The economy worked effectively as a mode of government-through-the-future for only a couple of decades. By the late 1960s, the forms of productivity growth, energy use, cheap oil, and Middle Eastern politics on which it depended were all under pressure. We think of modernity in terms of accelerating time, of time experienced in the present in relation to a future that appears to be moving ahead at an exponential rate of change. After 1948, perhaps for a couple of decades, a different future entered government.