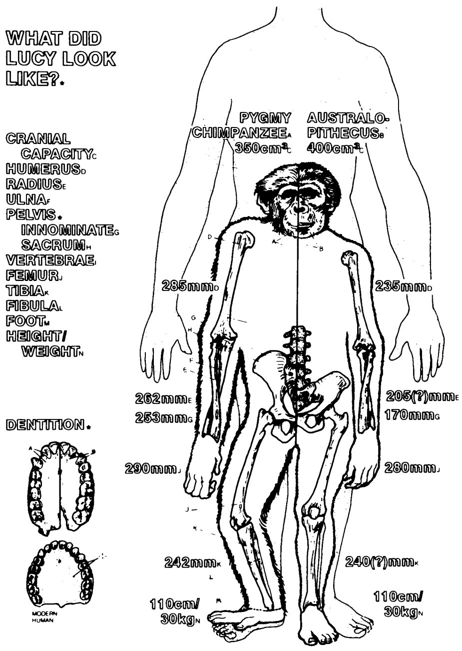

"Adrienne Zihlman's . . . conception of the relations among a pygmy chimpanzee, the australopithecine fossil named 'Lucy,' and a modern human. This coloring exercise in an educational publication teaches that the living species most like the human hypothetical ancestor is the pygmy chimpanzee . . . . In a very different construction of origins, the 'discoverer' of the fossil Lucy, Donald Johanson. . ., has joined with the designer of E.T., Jonathon Horton, and museum exhibit designer, Kevin O'Farrell, to create the prototypes for a line of rubber dolls—Lucy, her 'husband' Lorcan, and their children Lonnog, Lifi, and Liban." [From A. Zihlman, *The Human Evolution Coloring Book* (Barnes and Noble, 1982); reproduced in *Primate Visions*]

> preferred the prospect of pregnancy with the embryo of another species.

This last reference is to a theme of Octavia Butler's science fiction novel, *Dawn*, to which Haraway turns in her concluding chapter. This final move is in line with the radical genre-blurring spirit that pervades the book.

Third, Haraway is committed to a mode of deconstructive criticism, forged in the interaction between feminist and poststructuralist theories of language, that aspires to remake the objects of study and methods of inquiry in Western sciences. In her words (p. 324),

> It is specifically the permanent tension between construction and deconstruction, identification moves and destabilization moves, that I see, not as uniquely feminist, but as inherent to feminism—and to science. Both feminist and scientific discourses are critical projects built in order to destabilize and reimagine their methods and objects of knowledge, in complex power fields.

And earlier (p. 309), she poses most starkly the challenge to this critical project:

> The Romantic and modernist natural-technical objects of knowledge in science and in other cultural practice, stand on one side of [a] divide. The postmodernist formation stands on the other side, with its "anti-aesthetic" of permanently split, problematized, always receding and deferred "objects" of knowledge and practice, including signs, organisms, selves, and cultures. Whether scientific analysis could ever be postmodernist becomes a compelling question within this frame. What would stable, replicable, cumulative knowledge about non-units look like? . . . The issue is not method—technical versus interpretive, quantitative versus qualitative, reductive versus holist, etc.—but the structure (or anti-structure) of the object allowed to materialize in discourse.

Fourth, Haraway clearly defines her project as political and allied with the concerns of prominent contemporary feminist primatologists. In the context of her discussion of the career of Adrienne Zihlman she notes (p. 346) a predicament she shares with her subject:

> the existence of a division within academic discourse broadly . . . in the United States, where feminist critical studies have flourished institutionally and theoretically in the academy. In numbers, sophistication, and even material resources, U.S. feminist scholars in most disciplines can and do lead odd double professional lives, partly enmeshed in the "general" (i.e., still male-dominated and male-defined discourse) and partly enmeshed in a very heterogeneous and self-reproducing academic discourse.

The kinship between her own project of criticism and the critique emergent in the work of her subjects lends Haraway's claims a special authority and communicates a sense of joint participation in momentous intellectual change.

In the spirit of Haraway's own desire to envision a science such as primatology as "a heterogeneous space of contestable narratives," it must be said that each of these foundations of her own work is also highly contestable, and thus successfully provocative.

Primate Visions has in common with the most interesting and stimulating works now appearing in history, feminism, and cultural anthropology, among other human sciences, the qualities of being structurally unorthodox, highly personal, hyperbolic, if not visionary, in their claims, based on voracious scholarship—in short, experimental. Such works are landmarks by virtue of their effort to reshape not only the practices and purposes of their own disciplines, but also those of the communities, groups, and cultures on which they focus. For this, Haraway's book especially commands the attention of workers in the biological and medical sciences, who will find it a document at once most strange and most familiar.

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The Productivity Question

Productivity and American Leadership. The Long View. WILLIAM J. BAUMOL, SUE ANNE BATEY BLACKMAN, and EDWARD N. WOLFF. MIT Press, Cambridge, MA, 1989. xii, 395 pp., illus. $29.95.

For more than two decades business leaders and politicians have wept, wailed, and wrung their hands over the erosion of America's position in the world economic race. The deficit, the Japanese, Star Wars, and the break-up of the family have all been blamed for the alleged loss of competitive leadership. In spite of the heat and the intensity of the debate, light has been difficult to come by. The entire discussion has been conducted in an almost surrealistic atmosphere, with few attempts to define "competitive leadership" or to understand what the loss of such leadership might imply.

Baumol, Blackman, and Wolff have written a very important book. The debate had been cast in terms of a short-term "crisis," and the myriad of proposed solutions share little beyond oversimplicity—prohibit Japanese imports, make Americans work harder, tax more, tax less, spend less on defense. Baumol and his coauthors have refocused both the rhetoric and the substance of the argument in a way that makes the issues intelligible and may possibly lead to more effective policies. They have set the problem of "loss of leadership" in the framework of long-term economic growth, and they explore its causes and implications within the context of American and world development. Since the death of Simon Kuznets, economists have all but abandoned the study of economic growth. If *Productivity and American Leadership* does no more than force them to return to the study of this fundamental issue, it has more than justified the labor expended by its authors.

Eschewing inflammatory rhetoric—the authors are, in fact, quite optimistic about American prospects—the book reads like a well-structured series of lectures from an adult education course. First, the question of the importance of a rising level of national productivity is examined and the place of this country in the world economy is spelled out. Second, recent trends in three of the factors that underlie productivity increase are analyzed; and, finally, the authors suggest some policy changes.

The argument is clear: a nation's productivity is the ultimate determinant of the standard of living of its citizens; and, responding to the proponents of "either first or nothing," the authors show that it is the absolute, not the relative, level of productivity that is important to human welfare. In the process, they sketch the history of this nation's productivity record; and they demonstrate that, despite the economy's outstanding performance in the past, there is no evidence of any recent deceleration in productivity in general, or in its leading sectors in particular.

Is the United States losing the productivity race to countries with even better recent records? The study refutes the charge; and the authors argue convincingly that, given the ease of international technical, capital, and product transfers, national incomes would be expected to converge over time. Nor, the authors argue, is the United States becoming a service economy. In their discussion of this issue, an important but frequently overlooked point is underscored: If one economic sector is marked by rapid productivity growth and a second with little or none, over time, and given a wide range of demand specifications, the leading sector will, because the relative price of its output is falling and its products require less and less labor to produce, account for an even smaller fraction of national output. Similarly, the lagging sector will, for precisely the opposite reasons, bulk ever larger in the aggregate total. All developed countries are subject to this "cost disease"; and, perhaps surprisingly, the authors find that the United States has been less affected than the other members of the "developed club."

Two caveats. On a theoretical level, the trend toward ever greater employment in the service sector can be harmful if it is associated with poorly paid jobs with less chance of advancement or if the shift to low productivity sectors impedes the overall productivity rate. The authors acknowledge this problem, but they do not address it. Moreover, their evidence is drawn from the years 1950 to 1980, and the reader may ask about events of the last decade.

Turning to the factors underlying productivity change, Baumol and his colleagues focus on three: savings and investment, education, and the stock of resources.

It is difficult to have any significant productivity increase without some gross—and probably some net—investment; and if there are no savings there can be no investment. Unlike most of their peers, Baumol, Blackman, and Wolff conclude that the observed decline in the rate of savings and investment (40% over the three postwar decades) will not necessarily lead to a fall in national welfare. They argue that a part of the decline is a statistical illusion—the American investment data should be adjusted to take account of the lower price of capital goods and items (expenditures on R&D, consumer durables, and education) that are excluded from the traditional definition of capital but that should be included in any analysis of long-run growth. Moreover, they correctly note that, from the point of view of productivity change, it is not necessary that Americans save as long as foreigners are willing to forgo consumption *and* invest in this country.

The authors' analyses of education and of resource depletion are less controversial. After comparing the historical records of developed and underdeveloped countries, they conclude that education is important to economic growth, although the mechanism that links the classroom to increases in gross national product is not identified. Their analysis of the threat of resource exhaustion is both reassuring and compelling, and it underscores a point made long ago by Kuznets—resources are not fixed but are a function of existing technology. Improved extraction techniques can partly offset the exhaustion of the resource stock, and technical advance can produce substitutes for resources in short supply.

The discussion of savings and investment raises troublesome questions. Certainly adjustments should be made in the investment series for distortions in capital prices, and it makes eminent sense to expand the definition of savings to include at least a portion of expenditures on research and development. The arguments regarding adjustments for education and consumer durables are less persuasive. It is difficult to understand just how, given the American educational system's penchant to graduate lawyers, MBAs, and illiterates rather than scientists and engineers, expenditures on primary, secondary, or even higher education contribute significantly to the nation's ability to compete internationally; and it would take a magician to explain the relationship between consumer spending on automobiles, washing machines, and refrigerators and that goal.

It is certainly true that the nation can live and grow off foreign capital, but it cannot do so without cost. Unless we are prepared to nationalize or bankrupt those foreign-supported enterprises, dependence on capital imports will, in the not too distant future, have a negative impact on the level of American disposable income.

Finally, the savings data that underlie the argument, although representative of long-term and postwar experience, do not capture the recent near-total collapse of private savings. Moreover, the collapse in net savings has been far more dramatic than the decline in the gross rate; and it is the net rate that has suffered the most from the effects of the "Reagan disease." Continued budget deficits have kept real interest rates well above historic levels; and while those high rates have reduced total investment, they have, by making long-term investment appear particularly unattractive, also biased the time structure of the investment profile. Given the costs imposed by those rates, no one can fault the American businessmen for having chosen to invest in rapidly depreciating computers and supporting software rather than in plants and equipment.

For the empirical work the authors rely entirely on a readily available set of secondary sources, and many of those sources are, in turn, based on other readily available secondary sources. Though the authors should not be blamed for the failure of a generation of economists to develop the primary measures required by any long-run analysis, their choice of quantitative evidence raises some nagging questions. Many of the quantitative series on which their arguments depend terminate in the early 1980s and fail to capture any of the events of the last decade. Furthermore, recent scholarship has brought the accuracy of some of the existing data into question, and it is difficult to assess what effect revisions in those series might have on the study's conclusions.

Despite these problems, the first two sections of the work represent an important methodological and substantive contribution to our understanding of the prospects for the American economy of the '90s. The reader may well feel less sanguine about the policy recommendations aimed at maintaining the rate of American growth at historic levels and retaining our position of international economic leadership. Given the inherent optimism of the study, it is hardly surprising that the authors suggest few major policy modifications. Although they are sympathetic to the idea, they do not, for example, suggest that the capital gains tax be modified; and, though they feel the military spending may have "crowded out" some domestic investment, they do not recommend massive cuts in the military budget. They offer only four quite modest policy proposals and, should those prove inadequate, a single less modest one.

For the near term, Baumol and his coauthors suggest that the government increase funding for basic research, establish an office to facilitate international technological transfers, adopt rules that would mitigate, or at least reduce the amount of rent seeking in the economy, and move to improve minority education. Most thoughtful people would agree at some level with all four of these proposals, but there is still the question of "level." In the case of basic research, the economic argument depends upon an externally induced market failure. Some governmental support is almost certainly better than no support, but no one has the formula needed to determine the appropriate amount. As to the Office of Technology Transfer, the reader is left with a question about the definition of its mission, since the authors argue that the free market will provide adequate funding for applied research. In the case of minority education, every citizen can certainly applaud attempts to provide a better trained work force; but no one should be dubbed a racist for questioning why the same extended opportunities should not also be made available to nonminority youth. They will, after all, constitute the bulk of that future work force.

Finally, we can all agree that there is little economic gain and probably substantial loss inherent in the nation's long-standing love affair with rent seeking. The problem, of course, lies in differentiating rent-seeking from productive activities and in designing policies that, while preventing, or at least mitigating, such behavior, will not burden the economy with even more costs than those imposed by the object of the affair. To some, for example, Michael Milken's invention of the junk bond represents the greatest single technological advance of the 20th century; to others, however, given that it opened undreamed new opportunities for rent seeking, it is viewed as the greatest license to steal ever issued in the history of mankind. Again, with respect to mechanism, the authors suggest that the Japanese have been relatively successful in changing the rules of the game in a way that has minimized rent seeking. It is, however, certainly not unambiguously clear, at least to me, that the Japanese solution is not more costly than the dead weight imposed by all the lawyers' fees, greenmail payments, golden parachutes, and bribes to politicians and bureaucrats that we have been forced to bear.

Despite these objections, if the authors' modest proposals can be translated into efficient policies, they would likely nudge the economy in the direction of greater productivity increase. The same cannot be said for the author's "heterodox" "Failsafe (Reverse) Measure for Stimulating Economic Growth." Their goal is laudable: to provide a free market mechanism "perfectly capable of directing capital flows precisely in the manner required by productivity policy." Their solution—a government subsidy to business based on "the rate of growth in a firm's profits after correction for inflation"—is less so. If productivity could be mapped uniquely into profits, the proposal might well have merit; but even a casual glance at the history of American business performance indicates that, though productivity advance may be one cause of increased profits, it is certainly not the only one. Quite apart from the differential impact of the proposal on the few remaining competitive sectors of the economy, it is difficult to believe, given the suggested structure of rewards, that successful implementation would not trigger a surge of collusion, union busting, bribery, and rent seeking that would make the recent wave of mergers look like no more than ripples on a fish pond.

Give Baumol, Blackman, and Wolff top marks for refocusing a crucial debate in a productive manner, give them high marks for their analysis of the factors underlying productivity growth, raise your eyebrows at their policy suggestions, but flunk the other 20,644 members of the American Economic Association who have for too long ignored the problems of economic growth and development.

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Ventures before MITI

Managing Industrial Enterprise. Cases from Japan's Prewar Experience. WILLIAM D. WRAY, Ed. Harvard University Council on East Asian Studies, Cambridge, MA, 1989 (distributor, Harvard University Press, Cambridge, MA). xiv, 442 pp., illus. $25. Harvard East Asian Monograph 142. Based on a workshop, Vancouver, BC, Feb. 1982.

The postwar Japanese economic miracle is one of the most dramatic and complex episodes of the 20th century. Some aspects of the miracle confound the received wisdom of neoclassical economic theory, which would predict chaotic failure from the use of those very devices that lie near the heart of Japan's growth. These measures include industrial targeting, capital controls, recession cartels, lifetime employment, tight restrictions on foreign direct investment, and deliberate failure to rationalize agriculture, wholesaling, and retailing. So the miracle constitutes an arresting puzzle whose pieces are only now beginning to be fitted into place.

Attempts by Western scholars to engage the puzzle include the Brookings Institution's pioneering study of 1976, *Asia's New Giant*, edited by Hugh Patrick and Henry Rosovsky; Ezra Vogel's panegyric of 1979, *Japan as Number One: Lessons for America*; Chalmers Johnson's influential *MITI and the Japanese Miracle* (1982); my own *America Versus Japan* (1986), a comparative analysis by scholars in economics, history, political science, and business administration; and Karel van Wolferen's harshly critical bestseller of 1989, *The Enigma of Japanese Power*. All of these works, together with about a dozen other major efforts by writers from several disciplines, have concentrated on the postwar period. Yet each has noted that the roots of the economic miracle lie deep in Japan's past. The miracle itself might even be said to have begun in 1868, when the Meiji Restoration ended more than two centuries of hermetic isolation imposed by the Tokugawa shogunate.

Historians in both Japan and the West have long studied the political, economic, cultural, social, and intellectual contours of Japan between the early Tokugawa period and the Pacific War. A rich literature in both Japanese and English has resulted. Only recently, however, have books in English such as those mentioned above begun to appear, and most of them have taken a broad, top-down perspective. Largely missing have been bottom-up studies of particular Japanese companies, which were the shock troops of the economic miracle. The nine essays in the book under review here, written by seven specialists in Japanese business history and based on detailed archival research, represent the best of this new approach.

Editor William D. Wray, author of three of the essays, gives us an uncommonly valuable introduction and afterword. These two fragments, which total 81 pages, provide a sweeping overview of the theory and practice of Japanese business and economic history. Nowhere else in print is one likely to find such a serviceable introduction to the subject.

Among other curiosities, Wray notes the dominant but not altogether dysfunctional role of Marxism among Japanese economists. (Marxism's one salient advantage over neoclassical theory is its emphasis on evolutionary institutional process as opposed to static equilibrium analysis.) Wray goes on to describe the newly flourishing practice of business history by a group of Japanese scholars who are neither Marxists nor neoclassicists but straightforward empiricists. He describes both the virtues of this genre