# Book Reviews

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## Eric P. Bettinger

*When Schools Compete: A Cautionary Tale*, by Helen Ladd and Edward Fiske. Washington, DC: Brookings Institute Press, 2000, 342 pp., $47.95 cloth, $18.95 paper.

*Policy Entrepreneurs and School Choice*, by Michael Mintrom. Washington, DC: Georgetown University Press, 2000, 324 pp., $67.00 cloth, $24.95 paper.

School choice is currently the most hotly debated educational policy in the United States. Nearly every state has adopted some sort of school choice provision (open enrollment, charter schools, or vouchers), and yet the academic community is still uncertain whether school choice succeeds in improving schools or whether it is merely another in a long series of educational reforms. *When Schools Compete: A Cautionary Tale* by Helen Ladd and Edward Fiske and *Policy Entrepreneurs and School Choice* by Michael Mintrom are two fresh contributions to the debate about school choice. While Mintrom defines and examines the role that policy entrepreneurs have played in enacting school choice, Ladd and Fiske analyze the successes and failures of New Zealand's overarching school choice reform, *The Tomorrow Schools*.

Ladd and Fiske's work is by far the most comprehensive, readable case study on school choice reforms to date. They start by describing New Zealand's pre-reform, state educational system. In this system, a powerful teachers' union and a large, national Department of Education maintained a hierarchal and highly centralized decisionmaking process. For example, the central government decided what curriculum to implement, the types and numbers of supplies that each school needed, and even the appropriate color of school gyms. Most notably during this period, like in most U.S. school districts now, geographic boundaries were used to decide school enrollments. But in New Zealand, this regime ended in the late-1980s. Economic recession and privatization efforts led to calls for education reform, and in 1989, New Zealand approved a dramatic restructuring of the educational system—an almost completely decentralized, open enrollment program.

Besides describing the process leading to educational reform, Ladd and Fiske meticulously document underlying institutional details of pre- and post-reform education. Again, in one of the more readable descriptions available, they describe

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how schools changed from agents of the state to independent, autocratic units. Ladd and Fiske explain how parents became more involved in school leadership, how schools began adapting new curricula, how school financial management changed, and how eventually market mechanisms began motivating and changing schools—both for good and bad.

As in the marketplace for any economic good, inefficient, or inferior providers eventually must exit. In New Zealand, transforming schooling into a marketplace had the same effect. Ladd and Fiske recount many anecdotes of poor schools improving and of successful schools reinforcing themselves, but they also report how many struggling schools were unable to improve. In New Zealand's reforms, oversubscribed schools were permitted to choose among applicants. As a result, high-ability and high-income students typically transferred to superior schools while low-ability and low-income students became mired in unsuccessful schools. This segregation by ability is similar to the equilibrium predicted by Epple and Romano (1998). Their model of vouchers predicted that high-income and high-ability students would attend different schools than their low-income, low-ability counterparts resulting in greater inequality than in the current system.

School choice has often led to acrimonious and often partisan debates both in the political arena and in the academic community. Ladd and Fiske's discussion of New Zealand is an objective, fair treatment of how New Zealand implemented school choice and what have been its consequences. Although many of the consequences have been positive, New Zealand's reform has not solved all of its educational problems. Indeed, the new, existing system may be reinforcing existing inequities rather than improving education universally. Ladd and Fiske's contribution accentuates how New Zealand, and any other country implementing school choice, will inevitably have to make tradeoffs between efficiency and equity in educational provision.

While Ladd and Fiske's work focuses more on the outcomes of educational choice, Mintrom's book looks at the people who bring school choice to the forefront of policy debates. Mintrom's work is more of a careful definition of policy entrepreneurship with a case study on school choice than a detailed analysis of school choice. Mintrom's audience is primarily academic and his book attempts to compare market entrepreneurs in an economic marketplace to policy entrepreneurs in a public policy arena.

Entrepreneurship is an elusive concept. Although most economists would readily agree that entrepreneurship is an engine for growth and innovation, an exact definition is at best slippery and still evolving (see Casson, 1982). Although Mintrom himself acknowledges that "the term *entrepreneur* has been poorly defined" in the academic literature, he optimistically tries to reign in competing definitions into a coherent and useful model. But in the end, the reader is left wanting more precision.

The strength of Mintrom's analysis is his synthesis of the economic and political science literature on entrepreneurship. From describing Schumpeter's "creative destruction" (1934) to highlighting the traits described in Baumol (1993), Mintrom converges on a definition of entrepreneurs as people who search out new markets and introduce new products or information, thus allowing new trades and promoting economic growth. Mintrom goes on to describe in great detail how entrepreneurs synthesize information to identify opportunities, develop their innovations, choose optimal strategies, and provide essential leadership. Mintrom continues his analysis by comparing the economic paradigm of entrepreneurship to the introduction and implementation of new policy ideas. He argues that policy entrepreneurs are similar to economic entrepreneurs in that they must identify social problems, develop solutions, create strategies, and have the leadership and social skills to enact change.

Yet Mintrom's definition is not sufficient. On the one hand, Mintrom is trying to give shape to an amorphous, disjointed definition, but on the other hand, in an attempt to be all-inclusive, Mintrom produces a list of more than 20 traits that describe policy entrepreneurs. At times and for certain people and in certain environments, these traits or combinations of these traits can lead to success while at other times and for other people and in other environments, these traits come up short. In the synthesis of environment and entrepreneurial traits, Mintrom's definition loses form.

Additionally, Mintrom pays no attention to the successes of entrepreneurial policy—only to how it was enacted. Although Mintrom explicitly says that this is his purpose, it is difficult to evaluate the entrepreneurial model without looking at the consequences of entrepreneurial action. In economics, an entrepreneur is someone whose innovation promotes economic growth. Entrepreneurial profits and economic growth are tangible outcomes—identifiable measures of the relative success of entrepreneurs. In Mintrom's model, there is no effort to gauge the benefits to society of policy entrepreneurship. Mintrom uses the introduction of school choice as an example of policy entrepreneurship, but in making no effort to identify the successes of school choice, Mintrom makes the claim that policy entrepreneurship is separate from policy outcomes. The only outcome that matters for policy entrepreneurship is the adoption of the new policy or idea and not success of the new policy or idea.

In the herd behavior model of Banerjee (1992), a leader chooses a course of action or adopts a new technology. Other people (who assume that the leader and her initial followers have more information than they do) jump on the bandwagon. In Mintrom's model, the leader would be considered an entrepreneur. Her choice was overwhelmingly accepted, but in Banerjee's model, the leader may have adopted the wrong technology and subsequently led the economy to much slower growth or stagnation. In retrospect, this person was an impediment to growth, not a catalyst. Is such a person an entrepreneur?

Finally, failure to distinguish mechanisms by which entrepreneurial traits and the surrounding environment interact undermines Mintrom's empirical investigation. Mintrom surveyed state educational leaders asking them to identify and rate policy entrepreneurs in their states. With this data, Mintrom attempts to estimate how policy entrepreneurs (and their relative strengths) affect the likelihood that a state accepts open enrollment policies. But these regressions are fundamentally flawed. As Mintrom acknowledges and assumes away, there is no way to distinguish between opposing interpretations of the regression results. On the one hand, one can interpret the results to mean that stronger, more entrepreneurial leaders are more likely to influence school choice adoption (Mintrom's preferred interpretation). On the other hand, educational leaders in states that have already adopted school choice may be more able to identify a school choice entrepreneur. The key problem between these competing interpretations is the environment. Did the environment lead to identification of a policy entrepreneur and adoption of reform or did the policy entrepreneur independently influence the adoption of the reform? In Mintrom's analysis, there is no way to identify the correct interpretation.

In summation, school choice is a dynamic issue that is hotly debated and whose consequences are not fully understood. In *When Schools Compete: A Cautionary Tale*, Ladd and Fiske provide a comprehensive case study of New Zealand's experience with open enrollment. The thoroughness and readability of their work creates an important contribution to academic understanding of school choice and its consequences. Meanwhile, while Mintrom's work *Policy Entrepreneurs and School Choice* provides a thorough synthesis of academic literature on entrepreneurship, his application of an entrepreneurial model to school choice is somewhat premature.

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William Zumeta

*The Price of Admission: Rethinking How Americans Pay for College,* by Thomas J. Kane. Washington, DC: Brookings Institution Press and Russell Sage Foundation, 1999, 164 pp., $36.95 cloth, $15.95 paper.

*The Price of Admission,* by Thomas Kane of Harvard's Kennedy School of Government, is an excellent and very readable book. Its sharp policy focus—on assessing and reforming the nation's higher education finance system, in particular federal student aid and tax policies—and straightforward, unpretentious writing style are alas all too rare among academic economists. Yet, few will argue with the thoroughness of its command of the relevant economic literature and policy details or the range and relevance of its empirical analyses. And, the book is admirably efficient at just over 150 pages of text. The volume should be of interest to many analysts and other players in the higher education finance and student aid policy arenas. Much of it will be accessible to most of them. The first and last chapters are broadly accessible and capture the essence of the analysis and recommendations. Academics and researchers working in this field will surely want to read the entire book and ponder long the insights and ideas it offers. The book is also a good choice for a course syllabus. It provides a fine example of the kind of policy research and analysis academics and similar researchers can do: policy-focused and succinct but not in any sense "quick and dirty." It brings a wide range of relevant earlier research to bear while adding original empirical analyses as well.

Professor Kane states his purpose as "to provide a broad [I would add, economic] perspective on how the financial aid system works, identify its strengths and structural weaknesses, and offer a rough sketch of possible reforms" (p.6). He focuses on the effectiveness, efficiency, and equity of the student aid and higher education finance system, including federal tax credits and state operating subsidies to institutions, in using the resources it deploys to optimize student enrollments. He observes that public policy should at minimum seek to "ensure that all families have access to resources to finance worthwhile investments" (p.90), such as post-secondary education for those prepared to benefit. Kane shows convincingly that the financing system overall serves affluent students well but is ineffective in its long-standing goal of providing equitable access to qualified students of small means. The system is not only ineffective and inequitable but also inefficient in that a sizable share of its subsidies, especially those from state appropriations and federal tax credits, go to students who would enroll without them. And, the student loan system's structure, and even more the new federal Hope and Lifetime Learning tax credits, provide perverse incentives to states for increased tuition charges at their low-priced public colleges, which are just the schools most accessible to low-income students. These students, Kane shows, are the most price-sensitive. In short, he holds that redeploying resources in ways he suggests would yield substantial gains on his key criteria (effectiveness, efficiency, and equity) without greater outlays.

The book is laid out efficiently, in just five chapters. After an excellent introductory chapter, the second and third chapters cover how people pay for college, and the rising costs of higher education. The second chapter is particularly well done as it describes and critically analyzes the odd mixture of private payments, state institutional subsidies, and federal loans, grants, and now tax credits that finance the U.S. higher education enterprise and its customers.

In the fourth chapter, "Has Financial Aid Policy Succeeded in Ensuring Access to College?," Kane gets to his main policy analytic purposes. Here he presents most of his own empirical analyses (some of which have been published in other forms). These lead to a negative answer to the chapter title's question. As evidence Kane offers several empirical approaches to the effect of family income on probability of college entry for youth (from the National Education Longitudinal Survey 1988 cohort) with similar standardized test results. These show large, robust effects with many other factors ingeniously controlled. Next, he merges data from a variety of sources to test the effects of public college tuition variations and other variables on youth enrollment rates, and income differences in these. The results are clear: higher tuition, especially at community colleges, depresses enrollment strongly and low-income enrollments most. Kane juxtaposes these price elasticity results with evidence that recent gains in the college wage premium have had much more modest effects on enrollment behavior, dollar for dollar. This pattern is consistent with financing constraints on the ability of would-be students to invest in their human capital. He buttresses the point with data suggesting that many students would borrow more if policies permitted. Kane also offers a refined version of Hansen's (1983) analysis showing no discernible effect of the initiation of the Pell grant program on enrollment rates of low-income youth in comparison to those of higher income. He says, "This analysis certainly presents a challenge to the current financial aid system" (p.119), a wry understatement indeed.

Kane arrives here at another key conclusion for his policy analysis: a big problem with the complex student aid distribution system via colleges' aid offices is that it lacks transparency to low-income students and families. Those most dependent on aid don't understand the system, can't tell how much aid they will be eligible for until they have been accepted at a particular school and applied for aid, and often cannot cope with the paperwork. Many ignore the whole apparatus and either give up on college or are very sensitive in their enrollment decisions to tuition rates at low-priced public colleges.

In the concluding chapter, Kane turns to proposals for redesigning the financing system to increase effectiveness and fairness without increasing spending, offering "incremental reforms" and proposals for "more fundamental structural change." In the first class is simplifying dramatically the federal need analysis formula by basing the aid decision simply on the applicant's income and family size which, he shows, captures most of the variation in expected family contributions generated by the current complex formula. Standard aid amounts could thus be widely publicized in a simple table, achieving gains in transparency that would more than offset lost precision. He gives little attention to the inevitable resistance from those hurt by such a change (including an army of financial aid professionals), but Kane's argument must be forcefully made if the thinking that underlies current, overly complicated arrangements is ever to be challenged.

Another proposal involves "front-loading" the Pell grant program by making substantially larger grants but limiting them to the first 2 years of college in order to better entice low-income students on the margin about whether to enroll. The main objection is that this would force such students to turn to loans just as they are deciding, say, whether to move on from a 2-year to a 4-year school. Grants to students who have already shown some persistence could be a better buy than shifting all the funds to many who will not persist. As with much else about our multi-billion dollar annual investment in student aid, surprisingly little is known about the likely effects of such a policy change. Kane is well aware of this. He proposes to evaluate systematically the effect of different forms of aid and related interventions via "controlled experiments," analogous to those for federal welfare-to-work and job training programs. He does not offer much design detail, though. A big problem in evaluating student aid programs has been that, since much aid is a need-based entitlement to all who apply, and because much of additional aid packaging is jealously controlled by schools' aid officers to advance institutional ends, it is difficult to design a feasible and properly controlled experiment.

Kane's most ambitious proposal is a much-expanded income-contingent loan scheme with substantial loan forgiveness built in if one's career earnings turn out to be low. He believes such an approach would be much more transparent to needy students and their families than the current "backward-looking," complex need-analysis regime and less cumbersome to administer, among other advantages. He would finance the scheme either by ending current forgiveness of interest while students are in school, or, preferably, by limiting the Hope/Lifetime tax credits to low-earning borrowers. He offers some rudimentary analysis of the politics involved, but this is not very complete. Also, one wonders how transparent this scheme would look to prospective low-income borrowers. Another reviewer suggests that it "would inspire a new set of fears, albeit irrational ones, about mortgaging one's future and not even knowing the monthly payment" (Kramer, 2000, p.51). More generally, Kane never addresses the widespread fear of debt among low-income families, his main target group.

In sum, *The Price of Admission* is an exemplary contribution to policy research in the relatively neglected arena of higher education. The use of others' work and the original empirical analyses are marshaled with admirable effectiveness and efficiency. The new work is theoretically and empirically sound and sharply focused on the key policy question at issue, access for qualified low-income students. The policy proposals are provocative. My only significant problem with Kane's effort is that he might have tried harder to think through the political economy of the current financing set-up, why it is so resistant to change, and how the tools of economics and policy analysis—viz., the manipulation of incentives, the distribution of benefits and costs, and the implementation structures—might be used to move the present system off the dime. I fear that cogent economic analysis of the system's failings by itself will not be enough. We need more politically robust proposals for policy redesign that are true to Kane's basic principles.

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Francesco Caselli

*Governing Ideas: Strategies for Innovation in France and Germany*, by J. Nicholas Ziegler. Cornell University Press, 1997.

Comparative social scientists are rediscovering culture. For years it has been the goal of most researchers in social science to identify objective and measurable characteristics of a country's institutions, incentive structure, and endowments that would help explain wide disparities of outcome, whether economic, political, or social. In many areas this quest has been somewhat elusive, and several authors have come to recognize that cross-cultural differences in world-views, values, and self-perceptions—flimsy and hard to pin down as they may appear to the scientifically trained—cannot safely be ignored in attempts to explain why, say, measures of economic or political success vary so widely across the world.

Nicholas Ziegler's interesting collection of case studies can be seen as providing strong support for the view that culture is a key determinant of outcomes. The book compares recent government policy toward technological innovation in France and Germany. Presenting his very detailed studies of telecommunications, machine tools, and semiconductors, Ziegler shows that French and German policymakers tackled innovation policy in radically different ways and argues that these differences in policy led to important differences in the pace of innovation and in the speed of diffusion of new techniques. More importantly, he makes the point that such differences in policy stemmed in large measure from the belief systems and self-perceptions, i.e. the culture, of the high-level government officials involved.

In the first of the case studies, Ziegler examines the French and German governments' role in the transition of their respective countries' telephone systems from mechanical to digital switching devices. The challenge here was to mobilize high-tech expertise to design new equipment that would be compatible with the preexisting communication infrastructure, as well as to have the new equipment manufactured and installed. In Ziegler's recounting, the road toward these comparatively simple goals—as well as toward the other ones covered in the book—proved surprisingly bumpy, and full of detours, in both countries. The main feature of French policy seems to have been, however, reliance on research conducted in one particular public research institution, which had backing (at the crucial moment) at the highest level in the French government. Manufacturing was then implemented by private firms, strictly following specifications set by the public researchers. The German government, instead, tried to rely on financial incentives, providing private firms with conspicuous subsidies to come up with the final product without much direct public involvement in the R&D stage. The book argues that in this instance the French policy was more successful, as it led to a faster adoption of digital equipment.

Next, the author describes attempts at modernizing the machine-tool industry. The goal here was essentially to get domestic producers to start embodying electronic components—such as numerical control—in the equipment used and produced by the industry. Again, the story is so packed with institutional detail and policy reversals that it is somewhat hard to glimpse the big picture. However, it seems that the French government's main strategy was to engineer massive consolidation in the industry, in the belief that a few large-scale producers would be better positioned to upgrade their technologies than a large number of noncoordinated small companies. The German government, instead, preferred to favor research consortia that would make know-how available to member firms, including small ones. It also pumped considerable subsidies into the industry, as did the French, but these subsidies reached a wider spectrum of companies and products, instead of the few champions the French government singled out for support. In the author's view, France essentially failed at this project of technology upgrade, as witnessed by an unrelenting loss of market share in the industry, while Germany did quite well.

The story told in the third and last case study, semiconductors, is somewhat similar. The problem here was essentially one of creating an industry from scratch, which involved first and foremost the acquisition and dissemination of new scientific knowledge, as well as its combination with new manufacturing techniques. Once again, the French privileged a "national champion" policy, made more extreme in this case by a concern with national security that led the government to strongly discourage cooperation with foreign firms. Since technological progress in the industry proceeded at a relentless speed, this forced the anointed French would-be champion to engage in a game of catch-up it had no hope to win. Indeed it didn't, and by the end of the period the French all but gave up on developing a national semiconductor and computer industry. Germany, instead, followed a less ambitious policy of broad subsidies for organizations engaged in research aimed at developing computer-component products, even when such research involved foreign collaboration. The results were not overwhelming, but they did lead to some German presence in the international computer market.

To the mainstream economist these case studies read like horror stories—especially the ones from France—and it is therefore not surprising that the record appears less than successful. By systematically favoring firms with ties to the government, hampering competition, distorting management's incentives, and arm-twisting private corporations in taking actions decided by government bureaucrats, the French state seems to have done everything that is on the "don't" list of academic economists. Even the allegedly successful experience with telecommunications does not make for pretty reading: progress appears to have been often stopped by changes in the whim of the minister of the moment. Hence, the question remains whether digital technology would have taken hold more rapidly, and at less cost to the French taxpayer, if market forces had been allowed greater scope. The German case is much less extreme, but still shares with the French one a pattern of government intervention that still raises considerable perplexity. Economic theory, of course, does envision a case for subsidies, especially when—as it was mostly the case in Germany—such subsidies are mainly targeted to an activity with public-good characteristics, such as R&D. What is striking in Ziegler's account, however, is an apparent total lack of cost-benefit analysis to insure that the marginal Deutsche Mark spent on, say, subsidizing a German semiconductor research effort had a positive net social return. Indeed, one has to suspect that the German taxpayer would have been made better off by letting German firms and consumers continue to purchase their computers abroad—an outcome not too dissimilar from the one that was reached anyway.

Hence, policymaking groups in both France and Germany appear to have stronger interventionist tendencies than an economist would be willing to share, and investigating the role that "culture" plays in shaping these broad tendencies would be a fascinating but daunting enterprise. Ziegler wisely chooses to focus on a narrower target. His point that there are still important culturally based differences between the two countries is well taken. In particular, German policymakers come across in these pages as more pragmatic in their willingness to let events be shaped by market forces, less arrogant in their willingness to rely on advice from nonpolitical personnel, and more willing to learn from past mistakes. A great merit of this book is to investigate some of the possible sources of these differences in the cultures of the two elites. In particular, the author makes a persuasive claim that the educational system may be one of the contributing causes. Part of the argument is that France's highly competitive system of elite schools creates a small oligarchy (not Ziegler's word) of politicians and public administrators who are largely isolated and self-referential. This induces them to seek a "top-down" approach in which they take all the decisions and provide all the expertise (their obsession with consolidation can perhaps be interpreted as an attempt to enforce better-centralized control on an industry's development). In comparison, the more "democratic" German system implies that one's course of study has a greater influence on one's career than the particular school attended. The absence of a narrowly defined elite body of achievers humbles politicians into entertaining the contributions of a wider network of competencies, including those in the private sector.

Not all of the arguments are as tightly argued as one might wish. This is in part a consequence of the overabundance of detailed information—clearly not all equally important—that makes it difficult to follow the main threads of the discussion. But sometimes the problem is more serious, as some of Ziegler's claims are supported more by reiteration than by hard evidence. For example, at several points it is asserted that the scientific emphasis in the education dished out by the elite schools in France—alleged to have imparted a "deductive" bias to the mind set of the members of the French elite—contributed strongly to French officials' centralizing instincts. Yet this reviewer could not detect much evidence in the book showing that outcomes would have been much different had this oligarchy received an education more oriented towards, say, the humanities. Similarly, Ziegler argues that an "emphasis on the formal legal institutions of government [fails] to capture much of the story," yet it is clear that French formal legal institutions assign the government much more centralizing powers than German ones, so in a sense it is not surprising that French policy was much more *dirigiste.* Despite several such disconnects between the stories being told and the lessons the author distills, the book is very valuable as an eye-opening account of the realities of government policy and the determinants of government action.

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Nicholas H. Steneck

*Between Politics and Science: Assuring the Integrity and Productivity of Research,* by David Guston. Cambridge: Cambridge University Press, 2000, 213 pp., $54.95.

*Between Politics and Science* uses theoretical analysis and case-study method to reach conclusions about changes in science policy in the United States over roughly the past 50 years. The book's major conclusion is that during the decade of the 1980s the social contract for science developed immediately after World War II was replaced by a cooperative model that relied heavily on newly created boundary institutions. The analytical portions of the book are based on principle-agent theory; the case studies explore the development of policies and institutions developed to regulate research integrity and to foster research productivity.

The central problem of science policy, Guston argues, is finding mechanisms to deal with an "asymmetry of information." This asymmetry arises from the fact that

> …the patrons of research have a hard time understanding whether the recipients of their largesse are doing their bidding ...[while]... the recipients [of research funding] have a hard time providing evidence of their integrity and their productivity to their patrons (p.17).

Principle-agent theory explores this problem through a contractual approach, looking particularly at the negotiations that take place at the boundary between the principle (government) and the agent (science). Studying these negotiations, Guston suggests, provides "the most important way to measure change in science policy" (p.21).

The importance of contracts in principle-agent theory leads Guston to a short but informative summary of the evolution of the social contract for science (chapter 2). Readers less interested in theory might skip this chapter, since Guston ultimately adopts as his baseline for measuring change the familiar arrangement for research funding developed by Vannevar Bush (1945, 1960) and John Steelman (1947) at the end of World War II: "The political community agrees to provide resources to the scientific community and to allow the scientific community to retain its decision-making mechanisms and in return expects forthcoming but unspecified technological benefits" (p.62). The one key point that cannot be overlooked in this simplified summary of a complex "contractual" understanding, however, is that the boundary between the principle and agent, between government and science, in the immediate postwar years was fairly sharply drawn and largely impermeable. Politicians accepted self-regulation and self-policing in science and made no specific provisions for ensuring productivity, as for example by coming to grips with the different patent policies government agencies adopted during the early postwar era.

In chapters 3–5 Guston turns to historical analyses and case studies in an effort to pinpoint what he sees as the breakdown of the Bush–Steelman contract. Chapter 3 explains why challenges presented by McCarthyism, proposed NIH budget cuts in the 1960s, the 1970 Mansfield Amendment regulating military research, specific directives such as the Nixon administration's War on Cancer, and the debate over recombinant DNA research policy, questioned but did not overturn the Bush–Steelman contract. This discussion paves the way for a detailed analysis of the development of research integrity (chapter 4) and technology transfer (chapter 5) policies and institutions during the 1980s and 1990s.

Guston's insterest in integrity and productivity policies stems from the fact that they illustrate the emergence of a new "collaborative assurance" model for science policy that replaced the Bush–Steelman contract. This new model is organized primarily around units called "boundary institutions," such as the Office of Research Integrity (ORI) in the Department of Health and Human Services (DHHS) and the Office of Technology Transfer (OTT) in National Institutes of Health, DHHS. It is in these institutions that straddle the boarder between principle and agent, between politics and science, that the negotiations over science policy take place, now in a collaborative rather than a bipolar environment: "Whereas earlier politics and science had been starkly divided …they are now much more intimate and, indeed, collaborative" (p. 112). In this world of science policy *"after the social contract for science*, politicians and scientists have started to cooperate in assuring integrity and productivity, taking on new tasks and setting new boundaries for science policy" (p.139, emphasis added).

That scientists and policymakers probably collaborate more today on issues surrounding research integrity and research productivity than they did two or three decades ago goes without saying. Moreover, the ramifications of the collaboration within the new "boundary institutions," which Guston explores in his final, thought-provoking chapter (chapter 6), will no doubt play a major role in the evolution of science policy discussions in the future. However, these developments notwithstanding, this reviewer at least is not convinced that one can so easily talk about the Bush–Steelman era in the past tense or of the present era of science policy as based on a mutual sense of the need for cooperation.

The 1980s changes in the organization of technology transfer mechanisms for government-sponsored research brought about by Stevenson–Wydler (P.L. 96-480) and Bayh–Dole (P.L. 96-517) have unquestionably ushered in a new era of joint operation among researchers, research institutions, and government. However, the need for cooperation in this area has had support within segments of the research community at least since World War I and in some segments as far back as the establishment of the Land Grant Colleges during the Civil War. What Stevenson–Wydler and Bayh–Dole did, therefore, is make explicit and provide mechanisms for implementing an element of the Bush–Steelman contract that many researchers readily accepted but simply saw no need to work out in detail. Seen in this way, the 1980s changes in the way technology transfer is managed are simply friendly amendments to the contract in place and not a new model for operation.

The resilience of the Bush–Steelman contract is further illustrated in Guston's other case study, the development of research integrity policy. While there is certainly more cooperation today between research institutions and government than in 1981, when research integrity first became a national issue, there is little evidence to support the view that researchers and research institutions believe that the principle of independent self-regulation should be abandoned. On the contrary, whenever new rules and regulations for managing research integrity have been introduced, they consistently have been resisted on the grounds that they interfere with academic freedom and professional self-regulation.

The struggle to preserve self-regulation in science continues to influence science policy. Based on the recommendations of a special review group, DHHS Secretary Donna Shalala announced on October 22, 1999 that the primary responsibility for misconduct investigations would be transferred to research institutions or to the Office of the DHHS Inspector General (ORI, 2000). The move effectively re-polarized portions of the investigative process or, conversely, reduced the cooperative work done in the key boundary institution (ORI). Similar separation of duties is apparent in the "Proposed Federal Policy on Research Misconduct," which agrees that "[a]gencies and research institutions are partners who share responsibility for integrity of the research process," but then carefully delineates two spheres of responsibility:

> Federal agencies have ultimate oversight authority for Federally funded research, but research institutions bear primary responsibility for prevention and detection of research misconduct, and for the inquiry, investigation, and adjudication of allegations of research misconduct (OSTP, 1999, p.55723).

The fact remains, therefore, that even though ensuring the integrity of publicly funded research will continue to require joint government–science effort, in the minds both of research institutions, which incidentally do not receive much attention in Guston's book, and of many researchers, the ideal of the Bush–Steelman contract for science is very much alive and still the preferred model.

The resilience of the Bush–Steelman contract notwithstanding, *Between Politics and Science* is an important contribution that raises new questions for policymakers to consider. The negotiations that take place between principles and agents in what seems to be ever-expanding boundary institutions clearly have a significant role to play in the development of science policy. It is interesting to note, however, that boundary institutions are not new to science policy. At least since the time of the creation of the National Defense Research Committee (1940), principles and agents have been meeting to negotiate the policies that govern research funding in the United States. What is new about ORI, OTT, and the other boundary institutions that have emerged over the last 20 years is that they are increasingly cropping up on the science side of the principle–agent divide rather than the reverse. That is, politicians, as the public's representatives, seem to be demanding more say in the affairs of science while at times weakening the role their agents have in helping plan the politics of science. This raises what might be one of the most central questions for science policy in the years ahead, which is not whether boundary institutions ought to exist or play a role in science policy but how they should be distributed across the principle–agent spectrum to maintain research programs that best serve public needs.

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## Vladimir Popov

*Money Unmade: Barter and the Fate of Russian Capitalism,* by David Woodruff. 1999. Ithaca and London; Cornell University Press, 1999, + 228pp.

This book is about one of the most puzzling phenomena of the Russian transition that still does not have a good explanation—the unexpected rise of the nonmonetary economy in the 1990s. It covers the period before the August 1998 crisis and hence does not discuss the subsequent events, which seem to be no less puzzling—the nonmonetary economy in 1999–2000 started to disappear as unexpectedly as it emerged in the first half of the decade.

To be exact, we are talking here about three interrelated stylized facts:

*(1) The proliferation of trade, tax, wage and bank arrears that increased dramatically in 1992, after the deregulation of prices*. The real value of these arrears (in constant prices) or the relative value (as a percent of output) reached maximum three times: in mid-1992, in mid-1994, and right before the August 1998 crisis, i.e. exactly in those periods, when monetary tightening led to the fall in inflation. However, in the most prolonged period of macrostabilization—1995–1998—total arrears increased mostly

due to the overdue tax payments, whereas arrears to suppliers were relatively stable. After the August 1998 financial crisis all arrears were falling, although inflation was on a steady decline until spring 2000—a highly unusual pattern as compared to the pre-crisis experience, when the drops in inflation were always accompanied by the growth of arrears.

*(2) The increase in barter transactions that was rather steady before the August 1998 crisis*. Barter accounted for about 10 percent of sales of industrial enterprises in 1992–1993, for about 15–20 percent in 1993–1995, and increased to about 40 percent in 1996 and 50 percent by the time of the August 1998 crisis. After the crisis it was on a steady decline. The share of "barter taxes" (paid in kind) was also growing before the 1998 crisis and was declining afterwards.

*(3) The proliferation of offsets (vzaimozachyoty) and quasi-monies—wechsels—issued by regional governments and by banks and companies and widely accepted as means of payments by businesses and governments*. In mid-1996, when the use of *wechsels* was at its highest point, at least 34 provinces out of 89 accepted tax payments in *wechsels* (table 4 on p. 160).

There are plenty of papers seeking to interpret these stylized facts, but I am not aware of any coherent theory offering a consistent explanation of the above mentioned three stylized facts pertaining to the dynamics of nonpayments (arrears), barter, and quasi-money simultaneously.

The earlier explanations of the proliferation of nonmonetary instruments of exchange (mostly nonpayments in 1992–1994) centered on the monetary aspects—the lack of liquidity in the economy or the lack of credibility of the government/central bank policy to fight inflation. There was an obvious correlation between the money supply, on the one hand, and inflation (positive) and non-payments (negative), on the other. But it was interpreted differently by "Keynesians" and "monetarists". The former believed that Russian inflation is mostly of the cost-push nature and that tightening of the money supply results only in the increase of nonpayments that leads to the collapse of output. In contrast, the latter viewed Russian inflation as a monetary, demand-pull phenomenon. Enterprises, they said, react to monetary tightening by the accumulation of non-payments (instead of cutting prices) because of soft budget constraints and poor credibility of government policy; they know only too well that at the end of the day the government is going to bail them out (Popov, 1996).

These interpretations were mutually exclusive, but had one thing in common—the belief that nonpayments are associated mostly with macroeconomic policy, not with structural and institutional factors. They explained neither the monotonic increase in barter transactions in 1992–1998, nor the proliferation of quasi-money in 1994–1996, nor the decrease in the use of non-monetary instruments in 1998–2000, after the financial crisis, despite the tightening of monetary policy.

The structural "virtual economy" explanation by Gaddy and Ickes (1998) and Ericson and Ickes (2000) regards non-payments as the mechanism of hidden subsidization of the inefficient manufacturing sector by the efficient energy and resource sector. The latter is strongly encouraged to carry out such a transfer of funds by the government, which tries to avoid the shut down of noncompetitive manufacturing plants.[1] The mere fact of such transfers is hardly disputable, since the resource and energy sector is a net creditor, whereas most secondary manufacturing industries are net debtors

[1]Woodruff criticizes the "virtual economy" model briefly in the book (p. 174-76) and in greater detail elsewhere (Woodruff, 1999), saying that the redistribution argument is by no means a necessary precondition for the proliferation of non-monetary instruments. Theoretically this is perfectly correct (and Gaddy and Ickes do not seem to argue the opposite), but nevertheless such a redistribution from efficient to inefficient sectors is the actual story of the Russian transition. Woodruff also claims that the government

in the arrears balance.[2] However, what also needs to be explained is why these transfers from resource to nonresource industries take the strange form of arrears (instead of transparent direct subsidies or less transparent price subsidies) and why these transfers change over time in a way they do. Besides, the "virtual economy" theory does little to explain the rise and fall of barter and quasi-money.

Other structural explanations are numerous: tax evasion (Hendley et al., 1998), inefficient monetary and credit system and the lack of trust and financial discipline (Poser, 1998; Marin, 2000), monopoly power resulting in the spread of overpriced barter sales (Guriev and Ickes, 1999; Guriev and Kvassov, 2000), just to name a few. Although these explanations advance the understanding of the nonmonetary instruments, they usually do not offer the interpretation of the dynamics, since they concentrate on cross-company comparisons, not on time series. Besides, one crucial question remains unanswered: why tax evasion drive, or monopoly power, or other mentioned (and unmentioned) factors lead to such a peculiar form of redistribution as barter and non-payments, whereas in other countries they materialize in more conventional forms.

Woodruff's book offers a different—institutional—and potentially productive approach to the explanation of non-monetary instruments. It focuses on the institutional capacity of the state to ensure the monopoly to create money. We use to take this monopoly for granted, although "only in the second half of the XIX century can central authorities of the most-developed countries be said to have achieved the thorough dominion in the monetary sphere they continue to maintain" (p.3). The book itself in fact is a meticulous historical study of the development of money and nonmonetary instruments in Russia in 1987–1998 with inquiries into the Soviet monetary history (1924–1933), the monetary consolidation story in Italy during the "Risorgimento" of the 1860s, and the story of Shay's Rebellion in the United States in 1786 with demands to allow taxes to be paid in kind.

The monetary authority of the central bank and the government (and the ability to enforce this authority), as Woodruff believes, was by no means assured once and for all from the very beginning of transition. He argues, for instance, that the center-regional conflict in Russia is crucial for the understanding of the rise of non-monetary instruments, and that this rise was basically caused by the loss of control of the center over what counts as making a payment. "Local authorities asserted the power to define the non-monetary means of payment for legal obligations denominated in rubles, both through taxing in kind and encouraging local enterprises to arrange payments among themselves in similar manner" (p.18). Later, in 1996–1998, when the federal government and companies (losing control over pricing by offering discounts to those who had no need of them) found it increasingly costly to use *wechsels* they were removed from circulation (p. 173).

The attempt to incorporate institutional factors into the analysis of demonetization seems to be promising, although there is still much to be done to offer a reasonable model explaining quantitative changes in the relative shares of money (rubles and dollars) and nonmonetary instruments over time. All major developments in the story of demonetization of the Russian economy—the outburst of non-payments in 1992, the proliferation of quasi-money in 1994–1996, the unprecedented growth of barter

did not allow Gasprom to cut prices for domestic customers, although Gasprom itself was willing to do it as part of the rational pricing strategy (different prices for different customers). This seems to be a far-fetched argument in general, and also in the particular case discussed in the paper (1996, when Gasprom under the pressure of the government had to borrow abroad to pay its arrears to the budget and to the Pension Fund).

[2]In addition to the non-payments subsidies, much greater transfers are carried out through price subsidies (keeping domestic fuel and energy prices at a much lower level than world prices) and through direct subsidies to agriculture.

transactions in 1995–1997—were totally unexpected and came as a major surprise to scholars and policy makers. To add insult to injury, barter and nonpayments started to disappear after the August 1998 financial crisis as unexpectedly as they emerged. There is a danger that the non-monetary economy in Russia will share the fate of the centrally planned economy—it can vanish before it is fully understood by economists.

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*The Real Worlds of Welfare Capitalism* by Robert E. Goodin, Bruce Headey, Ruud Muffels, and Henk-Jan Dirven. New York: Cambridge University Press, 1999, 368 pp., $22.95 paper.

Drawing on research in economic sociology, this book identifies three types of welfare capitalist regimes. Liberal regimes feature their market economies and assign the welfare state only a residual social welfare role. Social democracies assign the welfare state a strong redistributive role. A corporatist regime acts "as primarily a facilitator of group-based mutual aid and risk pooling" (p.39). The authors maintain that all three types of regimes aim to realize six moral values: "promoting economic efficiency; reducing poverty; promoting social equality; promoting social integration and avoiding social exclusion; promoting social stability; and promoting autonomy" (p.22). However, they conjecture that overarching regime rationales lead liberal regimes to stress economic efficiency, social democracies to stress equality, and corporatist regimes to stress social integration and stability. The book seeks to test these conjectures by comparing the regime types on their success in implementing each of the moral values and to evaluate how much regimes stick to type in the implementation.

Brief historical sketches make the case that the United States, the Netherlands, and Germany are liberal, social democratic, and corporatist regimes, respectively. On data availability grounds, the authors let these countries represent their types. They draw data from three panel surveys—a 1983-1992 U.S. study and two 1985-1994 studies, one German, one Dutch. Each panel is a stratified, apparently random, sample of families drawn in an initial year from its country's families. Those who constructed the panels surveyed their subjects in each panel year. Each panel has more than 25,000 individuals—enough so that differences found among the three countries are statistically significant. The authors stress that their panel data allow them to study realization of the six moral values over time in a way that previous cross-sectional work could not, but also note that relying on existing data constrains their focus. For example, regime types differ in how they regulate markets, including labor markets, and in their macroeconomic policies. However, their panel data force the authors to consider primarily the tax-transfer aspects of the regimes. Data availability also constrains how they operationalize measures of the six moral values.

For efficiency, the authors look at a measure of employment, one of income source, and one of program efficiency of public transfers to the poor. They find that the working-age populations worked 70 percent (United States), 57 percent (Germany), and 47 percent (Netherlands) of potential hours for panel year three, with similar results for year eight. They also find that a larger percentage of people in households with a working-age head relied on public transfers as a principal source of income in the Netherlands than in the United States than in Germany. Finally, they find that a greater percentage of public expenditures went to the poor in the United States than in Germany than in the Netherlands. On the basis of these findings they conclude that "the liberal welfare regime ought indeed be deemed more efficient than either the corporatist or especially the social democratic one" (p.151).

Following the Organization for Economic Cooperation and Development (OECD) standard, the authors call a person poor if she or he lives in a household with family–size-adjusted income less than 50 percent of the median. With income aggregated over the panel, they find that the countries reduced their percentages of poor persons 23 percent (from 17 percent to 13 percent, United States), 73 percent (from 21 percent to 6 percent, Germany), and 95 percent (from 15 percent to 1 percent, Netherlands) pre- to post-government, i.e., from before to after taxes and transfers. Similar results held for households with a working-age head. Two further measures of post-government poverty, the percentage of poor people in the first N panel years and of poverty spells that last N years, were both lower in the Netherlands than in Germany and lower in Germany than in the United States (for all N from 1 to 10). So by these measures the Netherlands reduced poverty more, and ended up with less poverty, than did Germany than did the United States. Using four different measures of social equality—the Gini coefficient and Theil-0 for income distribution, the percentage of working-age persons receiving some public transfers, and the interquartile range of the number of hours worked—the Netherlands also promoted social equality better than did Germany than did the United States.

The authors study measures of integration into the household, labor force, income distribution, and society and conclude that "[d]epending on which indicators are accorded highest priority, any of these three countries might be said to promote social integration best" (p.196). From measures of household, employment, and income stability they conclude that "people's incomes and many other aspects of their lives are more stable in the social democratic Netherlands than elsewhere. And government interventions are at least partly to credit for that" (p.210). By autonomy the authors mean, roughly, freedom to choose a way of life. They define "combined resource autonomy" as the percentage of people who worked less than 40 hours per week and were nonpoor post-government, and find that the Netherlands was greatest for longitudinal variants of this measure. They conclude: "Social democratic welfare regimes—at least of the sort represented by the Netherlands in our study—provide more people with both time and money that form some important (if not the only) preconditions of a truly autonomous life" (p.236).

Overall the authors find, as they predicted, that the liberal United States does best at promoting efficiency, the social democratic Netherlands does best at reducing poverty and promoting social equality, and that both regimes stick to type in achieving these values. They find that corporatist Germany promotes stability but does so largely, like a social democratic regime, through use of taxes and transfers rather than by facilitating group-based mutual aid and risk-pooling as economic sociology theory would have it. Political opponents of social democracy usually point to its generous redistribution as cause of its lower employment. Some defenders of social democracy's redistribution argue that it is, rather, macroeconomic policy differences (not available in the authors' data) that cause employment differences. For the authors, however, both employment differences and differences in redistribution are largely effects of a third cause: the more vigorous pursuit of autonomy by social democratic regimes leads them to offer their citizens more time and money with which to choose ways of life.

The book thus makes an unusual case for social democracy. Like most other advocates of such arrangements, the authors stress the appalling record on poverty alleviation and income inequality of the United States compared with social democracies like the Netherlands. However, the authors also argue that the greater equality the Netherlands promotes results in more autonomy or real freedom, i.e., freedom from necessity, for a greater portion of its citizens. This line of argument is not without weakness. The transferred resources for the greater autonomy of some citizens come from the taxed market earnings of other citizens on whose autonomies the taxes impinge. So social democracies actually balance the freedoms of individuals differently from liberal regimes, rather than create more freedom for many at the expense of the freedom of none. As the authors concede, the social democratic approach to balancing individuals' freedoms runs risks: "Sweden and Denmark have seen their economies unravel, with potentially serious consequences for their social welfare arrangements as well" (p.15). The Netherlands economy and social welfare arrangements, though, apparently maintained a stable balance during the panel period.

The United States currently runs little danger of having its economy and social welfare arrangements unravel from overtaxation. In recent years it has given short shrift to the moral value of autonomy and begun to condition the receipt of transfer benefits by those at the lower end of the income distribution on work. The rationale behind such an exchange of benefits for work is that all who are able should contribute to the social product from which all receive a share. This rationale has obvious merit, but the approach embodies an equally obvious difficulty of unequal autonomies: those who inherit, or expect to inherit, wealth may choose not to contribute to the social product with their labor while others may not so choose. Hence neither the United States nor the Netherlands manages to mesh individual autonomies and equality in a fully satisfactory way. However, the book surely makes a good case that the U.S. approach to these issues deserves the label "mean spirited" in comparison to that of the Netherlands.

The authors press their case for social democracy in another direction as well. That Germany and the Netherlands employ less of their working-age populations than does the United States, they label an "intermediate" inefficiency. They find that median real post-government family–size-adjusted household incomes grew 1 percent (United States), 15 percent (Germany), and 16 percent (Netherlands), while OECD-measured real gross domestsic products (GDPs) per capita grew 15 percent (United States), 17 percent (Germany), and 19 percent (Netherlands) for the panel periods. They conclude that "those intermediate inefficiencies do not really seem to matter in so far as the bottom line is economic growth and prosperity. All these welfare regimes seem to produce about the same sort of economic growth and prosperity for their citizens" (p.151).

Here the authors overstate the case for social democracy and confuse measures of efficiency and prosperity with each other and their growth rates. Given technology and capital input levels, real GDP per capita is a good measure of aggregate efficiency. The purchasing power parity approach expresses different countries' GDPs in the same prices so that comparisons reflect only differences in the volumes of goods and services produced. With that approach, the authors' OECD source (Statistics Directorate, 1998, p.163) finds 1993 real GDPs per capita of $24,551 (United States), $18,532 (Germany), and $17,817 (Netherlands). Hence the Netherlands is less efficient than Germany is less efficient than the United States, and this is no mere intermediate inefficiency. This result only stands to reason—having a lesser proportion of the population working means having lower social product per capita. Equity and efficiency evidently are negatively correlated, though one needn't cause the other. Growth in per capita GDP measures growth in aggregate efficiency, not aggregate efficiency itself, and not the typical prosperity to which the authors connect it.

Though the per capita GDP measure aggregates efficiency well, it does not measure typical prosperity well because it is an average, and the average of an asymmetric distribution like income is dragged far above the typical by a few very high incomes. However, median income measures typical prosperity well. So growth in median income measures growth in typical prosperity, not typical prosperity itself to which the authors connect it. But the authors findings do suggest that, using their superior redistribution systems, Germany and the Netherlands did translate their per capita GDP growth into growth in typical prosperity while the United States failed to so translate its roughly similar per capita GDP growth. So, given the order of magnitude similarities among the three countries' GDPs, it is perfectly plausible that all three countries achieve similar typical prosperity as measured by their median incomes. However, their OECD source fails to provide median incomes and the authors fail to use their survey data to compare median incomes so that their case for similar typical prosperity in the three countries gaps.

The authors also consider how the Netherlands and Germany reduce poverty more than does the United States. For income aggregated over the first five panel years, they find that 4 percent (United States), 52 percent (Germany), and 48 percent (Netherlands) of the non-poor received some public transfers while 42 percent (United States), 9 percent (Germany), and 4 percent (Netherlands) of the poor received none. Results for other aggregation periods are similar: compared with the other two countries, the United States efficiently confined transfers to the poor but inefficiently covered the poor with transfers. The authors argue that a trade-off between underpayments to the poor and overpayments to the non-poor exists and suggest that their greater reliance on universal flat-rate benefits allow Germany and the Netherlands to reduce poverty more than the United States. Such benefits, they argue, "are less redistributive than would have been the same amount of money spent through a system of benefits targeted more tightly on the poor. But increasing the number of people who benefit from public programmes increases their political constituency and hence the budget available for distribution" (p.50).

Greater reliance on universal flat-rate than means-tested benefits may well increase the constituency for social programs and hence the distribution budget.However, less of the gross distribution that occurs under flat-rates is likely to be net distribution, e.g., some people will receive in benefits only what they pay in taxes. Reliance, to some extent, on means-tested benefits has an advantage of greater distributional transparency as well as efficiency. Also, if the tax system is steeply graduated and the means-tested benefits are generous, even if conditioned on work, means-tested benefits seem to embody an approach that should well attenuate market-generated inequalities: transfers on the basis of need, taxes on the basis of ability to pay, and work on the basis of ability. Just what mixes of means-tested and universal flat-rate benefits best alleviate poverty seems less clear than the authors maintain.

The case for social democracy that emerges from this book runs roughly as follows. Social democracies reduce poverty and promote social equality and stability better than do regimes that rely more heavily on their market arrangements. Social democracies may be less efficient than more market-oriented regimes, but the lesser efficiency needn't result in lower typical prosperity. Social democracies' heavy reliance on universal flat-rate benefits maintains a spirit of generosity among their citizenry that assures that more of them enjoy greater real freedom than their counterparts under more market-oriented regimes. The authors' data analyses do not always fully support their argument, but the analyses are sufficiently careful and the argument sufficiently well developed that no one involved in making or analyzing U.S. transfer policy should forgo a chance at grappling with this book's thinking.

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## Annika Sundén

*Should the United States Privatize Social Security?,* by John Shoven and Henry Aaron. New Haven: Yale University Press, 1999, 369 pp., $40.00 cloth, $16.95 paper.
*True Security: Rethinking American Social Insurance,* by Michael J. Graetz and Jerry L. Mashaw. Cambridge, MA: MIT University Press, 1999, 178 pp.

Social insurance and, in particular, Social Security is at the forefront of current public debate. Much of the debate revolves around how the nation's retirement system should be structured to best provide adequate income in old age. One side argues for keeping the system public and the current benefit structure as is, while the other side argues for a privatized system in which individuals manage their own retirement funds. Both these books take an in-depth look at how social insurance programs should be structured.

In *Should the United States Privatize Social Security* the focus is on old-age retirement benefits. The book consists of two papers—John Shoven's "Social Security Reform: Two Tiers Are Better than One" and Henry Aaron's "Social Security: Tune It Up, Don't Trade It in"—presented at the Alvin Hansen Symposium of Public Policy at Harvard University in 1998. With the retirement of the baby-boomers, the Social Security system is projected to face a long-term deficit. Starting in 2037 approximately 70–75 percent of promised benefit levels could be covered. One solution to cover the shortfall would be simply to increase payroll taxes or cut benefits. However, an important concern is that this would further decrease the rate of return in the system. With a maturing Social Security system, current generations receive lower returns on their payroll taxes than the earlier generations, which paid into the system for only a short time but received full benefits. Instead, reform discussions focus on how to increase the revenues to the system without relying solely on increases in the payroll tax or cuts in benefits. Aaron and Shoven agree that the Social Security system should accumulate reserves and invest some of these reserves in equities. This would result in an increased rate of return and higher national savings, and help close the financing gap. However, the authors strongly disagree on how to achieve this goal, and their essays provide a useful and clear summary of the current debate over Social Security. Shoven argues that the best way to solve the financing problem and increase returns is to introduce substantial reform through privatization of the system. This means diverting a share of the payroll tax into individual accounts. Individuals would manage their own retirement funds and at retirement the balance could be converted to an annuity or paid out as a lump sum. Aaron, on the other hand, argues that the current defined benefit structure should be kept, but that the system should be allowed to accumulate reserves and invest these reserves in equities. In addition, Aaron proposes a menu of small changes that would help to close the financing gap.

The format of the book follows that of the symposium. After the two essays are discussions by four scholars that critically evaluate the proposals. The discussions focus on whether the proposals achieve the goal of closing the financing gap. The discussants come down on different sides of the debate but taken together provide a detailed list of the pros and cons of the two approaches. This book is a very useful and informative reading for anyone following the current Social Security debate.

The book by Michael J. Graetz and Jerry L. Mashaw, *True Security: Rethinking American Social Security* takes a broader perspective and discusses the fundamentals of social insurance: What should be included in social insurance and how should these programs be structured to best reach the populations in need? They focus on five areas—health care, unemployment insurance, disability and work injury, families with children, and retirement security—and describe in detail the current protections. The authors take a bleak view of social insurance programs in the United States and conclude that many programs should be restructured or expanded. Compared with many other developed countries, the Unites States lacks universal protections in some very important areas, most notably health care. Another area is family-based programs such as parental leave and subsidized child-care.

To describe their vision, Graetz and Mashaw borrow examples from existing state programs and then present new solutions. It is unfortunate that many of the proposals they describe are sketchy and lack a discussion of their effectiveness. For example, the authors do not discuss how the introduction of individual accounts for Social Security shifts the investment risk onto individuals. In a system of individual accounts, a person's retirement benefit will depend on how well the investments perform, so the level of benefit is sensitive to shifts in the market. An individual who invests too conservatively may end up with inadequate funds, while someone who invests too aggressively may be hurt in a market turn-down during the month of retirement. It is clear that an individual account plan introduces variability in benefits that already are quite low and that this could threaten retirement income security.

The book would also have been more convincing if the authors had discussed how the reforms they propose would be financed and what the effect on the overall economy would be. Without such a discussion it is difficult to evaluate whether the agenda the authors propose is possible. It is also important to take into account the effects of programs on individual behaviors such as labor force participation and savings. For example, a mandatory savings program may have no effect on the overall savings rate if it offsets other savings individuals would have undertaken in the absence of the program.

The book concludes with a section on institutions and politics of social insurance. It makes an important point: when we evaluate social insurance programs and think about reform, it is important to look at all programs and consider how they interact. The authors state that their book is not about a regime change or social, economic, or political revolution but taken together their vision of the American social insurance system provides a fundamental change.

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