READINGS

A Contrarian Voice

Laboratory Earth: The Planetary Gamble We Can't Afford to Lose
by Stephen H. Schneider
(New York: Basic Books, 1997) 174 pages

Reviewed by Richard S. Lindzen

One would think it would be possible to present a coherent argument and discussion in a small book (154 pages plus seventeen pages of introduction and preface), but Stephen Schneider fails in *Laboratory Earth*. That book casts doubt on the "Science Masters" series of which it is a part. The series is the creation of John Brockman, Schneider's literary agent. Apparently the book started out worse. The preface thanks eight individuals for editorial assistance and another for psychological insights. Schneider also complains of appearing at "breakfast bleary-eyed from late hours of writing and editing." For all that, the book is still an inchoate and poorly written melange of Schneider's public lectures over the past several years.

As best I can tell, Schneider tries to endorse both the study of the Earth as a system and the integrated assessment of potential damage from possible global warming. Schneider's prejudice is revealed when he presents the Paul Ehrlich-John Holdren formula, I=PAT: environmental impact equals population times affluence per capita times technology used. That is in the part of the introduction where Schneider introduces population, affluence, and technology as "the enemy." He also informs us that an altered climate is a "damaged climate." As an example of our perpetual tendency to degrade our environment, Schneider points to the period "centuries ago" when "uncontrolled coal burning fueled the infamous London smogs." Those smogs occurred from the mid-1800s until the 1950s–hardly centuries ago. That is an early alert of this book's concern for accuracy.

The book proper begins with some musings on how earth system scientists dream of having access to a time machine that would permit us to observe the origins of the earth and life. Since we lack the time machine, he casually describes the tools that are available for inferring such information. He then presents a crude description of the development of the earth and life–or, as he refers to it, the coevolution of life and climate–that is bettered in most high school earth science texts.

Richard S. Lindzen is Alfred P. Sloan professor of Meteorology, Massachusetts Institute of Technology, Cambridge, MA.

The book continues with chapters on climate, climate modeling, biodiversity, and integrated assessments of policy options. The author never explains what he means by integrated assessment, but he appears to be referring to subjective estimates of the ranges of possible environmental impacts of human activities that can be used in turn to estimate costs that can then be compared with the cost of policy options. More will be said about that later, since it appears to be at the heart of any argument Schneider may be presenting.

PLAUSIBLE DENIABILITY

A surprising amount of space is devoted to trivialities. Schneider tells of heat being transferred by "fluids in motion, especially the atmosphere and the oceans." We learn that the interactions of wind and sea surface are "part of a set of processes known as air-sea interactions," and that numerical rules used in computer models "today are called algorithms." There are the usual claims that "most scientists" believe this or that (extended on page 121 to "most futurists"), as though most scientists were equally expert in geology, climatology, and meteorology.

Throughout his discussion, Schneider threads vague suggestions of the relevance of greenhouse warming–he seems to want the reader to accept the danger of global warming as a fact but to allow himself deniability. That pattern is found in his earlier works. It is revealing to recall that in his 1976 book *Genesis Strategy*, Schneider reviewed the arguments made by others in support of global cooling and called those arguments "compelling." And concerning a 1976 book entitled *The Cooling* (subtitle: *Has the next ice age begun? Can we survive it?*), by Lowell Ponte, Schneider wrote that "public awareness of the possibilities must commence, and Lowell Ponte's book is a good place to start." Nevertheless when he later denied having ever endorsed global cooling, critics pointed out that Schneider had coauthored a paper in *Science* that stated that cooling from aerosols was more likely than warming from increasing carbon dioxide. Schneider then reversed his early denial and boasted that the fact that he had changed his view indicated that he was a good scientist.

Schneider discusses early skepticism about the theory of plate tectonics, a theory that was not accepted until after World War II. Schneider refers to a proclamation by the president of the Philosophical Society (not named by Schneider) in the 1920's that continental drift was "utter damned rot." I was curious to learn more about that incident, but the endnotes references a book by John and Katherine Imbrie about how climactic changes can be driven by the variations in Earth's orbit, and offers no further information. That use of inappropriate references is annoying for anyone who bothers to check. Clearly, the use of endnotes in this volume is not meant to provide real information. Nevertheless, Schneider offers the reference to suggest that the predictions of significant global warming will, like the predictions of continental drift, come to be accepted despite present criticism and uncertainty.

His sensitivity to criticism, and Schneider's equating the global warming theory (which is claimed to have the support of "most scientists") with the long-rejected continental drift theory is revealing. I assume it to be an implicit recognition on the part of warming advocates of the weakness of their case. Schneider insists that only the voices of supporters be heard. Others are referred to as contrarians.

For a description of contrary views, Schneider refers the reader to an article in *Harper's* by Ross Gelbspan. The article, not otherwise described by Schneider, is a vitriolic screed in which opponents to global warming are described as "interchangeable hood ornaments on a high powered engine of disinformation" paid for by industry. Schneider does inform the reader that Gelbspan is a Pulitzer Prize winning journalist. That is a strange claim. The Pulitzer Prize was awarded to the *Boston Globe* for an article that never lists Gelbspan in any capacity. Gelbspan did not write the article in question. Presumably, the *Globe* is permitted to associate anyone with a prize awarded to the paper, but that practice smacks of a policy which would permit deans to claim shares of the Nobel Prizes awarded to faculty.

A surprising amount of this book is devoted to excursions that in no discernible way deal with central theme of the book. There are attacks on Aaron Wildavsky and Julian Simon for their views on biodiversity and attacks on free market economists and economists more generally. The attacks are presented in a tone of lofty condescension but are otherwise unconvincing. Presumably the attacks are designed to demonstrate the breadth of Schneider's concerns. Many of Schneider's claims, for example, about the successes of model predictions, are simply wrong and too numerous to list in a short review. Clearly, his is not a book for the serious reader. Rather, it seems to have been written to reassure the unsophisticated environmental enthusiast of the continuing possibility of doom.

GAMBLING ON GUESSES

Schneider is never clear on what "gamble" he is referring to in the book's subtitle, "The planetary gamble we cannot afford to lose." Nevertheless, the book ultimately offers a fairly standard environmentalist approach to issues–at least in a rather impressionistic manner. First, his emphasis on the earth as a system is probably meant to suggest that everything is connected to everything else. That is true but trivial. Quantitatively, many of the connections are too weak to be of practical significance. To get around that, Schneider next emphasizes uncertainty and subjective probabilities. The latter are guesses made by putative experts. Here, Schneider routinely associates very unlikely outcomes with 10 percent to 20 percent likelihoods. For example he associates a 6°C warming with a 10 percent probability.

The naive reader might consider such probabilities small, but in many scientific contexts they are huge, and they guarantee that scenarios constructed in the integrated assessments will include scary possibilities at unreasonably high likelihoods. The high likelihoods then lead to the need for what Schneider generally refers to as "insurance" in the form of the usual energy and environmental policies commonly proposed by the bureaucrats in Schneider's ideological camp. It is a dishonest approach that ultimately has no relation to science.

Surprisingly Schneider spends some five pages remarking on my response to a survey on climactic issues. His discussion is an example of his practice of suggesting that critics are "extreme" and thus incorrect without actually addressing the issues in question. The survey was prepared in connection with an integrated assessment study by Granger Morgan and David Keith at Carnegie Mellon University. Schneider refers to a particular question as "typical," and notes that my answer differed from that of the other fifteen "experts." The question was "What equilibrium change in global temperature did one expect from a doubling of CO_2?" I had put forward a "guesstimate" of 0.3°C with a standard deviation of 0.2°C. The rest of the responses clustered around 2°C-3°C with large standard deviations. Schneider implies that the fact that my response differed from the others discredits my response.

But the question he focused on was not typical. The authors of the study noted that there were very large differences among the respondents for all the other questions. Further, the authors recognized that the tendency for the responses to cluster around the commonly presented model-based value probably represented a herd instinct since the accompanying estimates of large uncertainty suggested that there was little real basis for the specific guess.

SIGNAL TO NOISE

A doubling of CO_2 in the atmosphere results in a two percent change to the atmosphere's energy balance. But the models used to predict the atmosphere's response to this perturbation have errors on the order of ten percent in their representation of the energy balance, and those errors involve, among other things, the feedbacks that are crucial to the resulting calculations. Thus the models are of little use in assessing the climatic response to such delicate disturbances.

An additional problem with commonly-used climate models is that their large responses—corresponding to high sensitivity—to the small changes that would result from a doubling of CO_2 crucially depend on positive or amplifying feedbacks. But the treatment by those models of the dynamics of water vapor and clouds, crucial for amplifying feedbacks, differ from actual observations of the climate, calling into question the model results. Without the model results, one is left with little to suggest that there is significant warming caused by human activities, as opposed to the normal variability intrinsic to the climate system. Hence my guesstimate.

Clearly, what dismayed Schneider was not so much my estimate, but my refusal to go along with a large range of uncertainty. Without large uncertainty, one cannot squeeze disaster out of integrated assessments, and hence, for Schneider, vagueness and uncertainty become the *sine* qua non for scientific credibility. My own feeling is that scientists can be wrong, but they should try to make their predictions definite enough for opponents to disprove.

THE USUAL POLICIES

Schneider concludes with a set of suggestions pulled from the 1991 report of the National Research Council, *Policy Implications of Greenhouse Warming*. Primarily, they are meant to be low-cost actions that are supposedly worthwhile in and of themselves: continue to phase out of freons, stop deforestation, preserve biodiversity, control population growth, include warming considerations in all government planning, participate in international agreements and meetings on those issues. Without arguing the virtues or costs of those suggestions, it should be pointed out that they have almost nothing to do with warming. They were chosen because the report concluded that since the probability of global warming is so uncertain, large public expenditures to deal with this alleged problem are not warranted. Schneider fails to mention that conclusion. All that has changed in the years since that report was issued is that estimates of probable warming have been coming down.

Schneider claims, without explanation, that the suggestions could lead to emissions reductions of between 10 percent and 40 percent, and that individuals as diverse as himself, the economist, William Nordhaus, and the "industrialist" Robert Frosch could agree on that. But Frosch is hardly an industrialist; he was working for General Motors at the time of the report, but he had previously been administrator of NASA and head of the United Nations Environmental Program.

Moreover, the panel that developed the report also included ardent environmentalists like Jessica Matthews, Maurice Strong, and Jane Lubchenco. The deliberations were contentious, and the environmentalists demanded and received many concessions. But even with the stacked panel, one paragraph from the report bears repeating: "Uncertainty cannot be ignored in responding to greenhouse warming. Errors of doing too much can be as consequential as errors of doing too little; the error of trying to solve the wrong problem is as likely as the error of failing to act. Above all, errors are inevitable, whether one acts or not, but inevitable errors are also occasions to learn."

While one leaves this short book with a certain distress at its parsimonious approach to truth, it is totally consistent with Schneider's philosophy expressed in an interview with Jonathan Schell in the October 1989 issue of *Discover*: "We are not scientists but human beings as well. And like most people we'd like to see the world a better place, which in this context translates into our working to reduce the risk of potentially disastrous climate change. To do that we need to get some broad based support, to capture the public's imagination. That, of course, entails getting loads of media coverage. So we have to offer up scary scenarios, make simplified, dramatic statements, and make little mention of any doubts we might have. This 'double ethical bind' we frequently find ourselves in cannot be solved by any formula. Each of us has to decide what the right balance is between being effective and being honest. I hope that means being both." Hope springs eternal.

STEPPING STONES OR STUMBLING BLOCKS

The Economics of Preferential Trade Agreements
by Jagdish Bhagwati and Arvind Panagariya
(AEI Press, 1996) 168 pages

Reviewed by Thomas Oatley

The static welfare consequences of preferential trading arrangements (PTAs) such as a free trade agreement or a customs union have been well known since the 1950s. The classic approach compares the trade creating effects of PTAs with their trade diverting effects. Trade creation arises if the elimination of tariffs between countries that form a PTA shifts consumption inside the union from less to more efficient producers. Trade diversion occurs if the elimination of barriers inside the PTA and their continued existence on goods coming from countries outside the PTA shifts consumption from more efficient producers outside the PTA to less efficient producers inside. Within this framework the welfare implications of PTAs depend on the relative importance of the two effects: if trade creation is greater than trade diversion, a PTA improves global welfare; if trade diversion is greater than trade creation, a PTA reduces global welfare.

Those welfare effects have been well understood, and little amended, for more than forty years. Why, then, do we need a new book that revisits the economics of preferential trade agreements? Contemporary interest in PTAs emerges from the apparent conversion of industrialized country governments from their postwar commitment to multilateral and nondiscriminatory trade under the rules of the General Agreement on Tariffs and Trade to regional (and discriminatory) trade arrangements.

Examples exist in North America, Asia, and Europe. In the United States this conversion began with the Reagan administration and has continued under Clinton. In 1989 the United States and Canada signed a free trade agreement, and in 1993 this agreement was extended to incorporate Mexico and transformed into the North American Free Trade Agreement (NAFTA). At the Summit of the Americas in December 1994 President Clinton and Latin American heads of state committed themselves to a hemispheric free trade agreement by 2005.

Asian-Pacific Economic Cooperation (APEC), an initiative that brings together nineteen countries on both sides of the

Thomas Oatley is assistant professor of political science, University of North Carolina at Chapel Hill.

Pacific, was launched in 1989. While not yet a PTA, APEC has declared that it will produce a free trade area by 2020, with developed country members providing free access to their markets for the developing country members by 2010. When one includes the European Union, which in the period from 1982 to 1994 expanded its membership from nine to fifteen countries, one recognizes that the last ten years have seen the emergence of a significant regional challenge to the nondiscriminatory multilateral trading system constructed after the Second World War.

The apparent shift in world trading arrangements has generated debate within policy and academic circles about the implications for global economic welfare. One set of protagonists in that debate, including high profile members of Clinton's economic team, such as Lawrence Summers, actively promote PTAs. That group considers that the trade diverting consequences of PTAs are likely to be quite small. Because the current trend toward preferential trade is occurring along regional lines, PTAs are likely to group countries that are "natural trading partners," i.e., countries that trade extensively with each other even in the absence of a PTA. PTAs among natural trading partners are likely to minimize trade diversion.

Moreover, that group claims that PTAs are not a final destination, but merely an intermediate stop on the way toward, and a useful instrument for achieving, global free trade. As the 1995 *Economic Report of the President* notes, the Clinton administration's "most distinctive legacy" in trade policy will be the "foundation it has laid for the development of overlapping plurilateral trade agreements as stepping stones to global free trade." Summers cogently summarizes the case in favor of PTAs: "global liberalization may be best, but regional liberalization is very likely to be good."

CRITIQUING REGIONALISM

The book under review is edited by two economists, Jagdish Bhagwati and Arvind Panagariya, who have long argued the case against PTAs, and this volume represents another effort to convince PTA advocates to reconsider their positions. The volume marshals two arguments against preferential trade agreements. It argues first that the efficiency costs of regional trade arrangements are larger than PTA proponents recognize. Those costs arise from two channels. First, the claim that regional trade arrangements minimize trade diversion by grouping natural trading partners is wrong. One measure of "naturalness" that proponents often rely upon, geographic proximity, Bhagwati and Panagariya argue, is not a good proxy. Chile, for example, shares a border with Argentina but not with the United States. Yet, in 1993 Chile shipped only 6.2 percent of its exports to Argentina, while 16.2 percent of its exports went to the United States.

The volume of trade flows between countries, another popular indicator, is not a good proxy of naturalness either. Existing trade flows are shaped by existing preferential agreements. For example, a preNAFTA agreement that allowed American firms to reexport duty free from Mexico into the American market created incentives for American firms to locate assembly operations in Mexico. The existence of that preferential arrangement therefore accounts for a significant proportion of U.S.-Mexican trade flows. Justifying additional preferential trade on the basis of the flows that resulted from existing preferences is bad science and bad policy. Thus, this volume suggests, the current tendency to form PTAs along regional lines does not unambiguously minimize their trade diverting consequences.

In addition, the proliferation of PTAs generates a "spaghetti bowl effect" in which "products in most important markets . . . enjoy access on widely varying terms depending upon where they are supposed to originate." In this spaghetti bowl everything is difficult to disentangle. The transaction costs attached to importing and exporting rise dramatically. One such cost is elaborated in the Wonnacott essay. Free trade areas like NAFTA include rules of origin that specify the amount of local content required to qualify for tariff-free status. Rules of origin are required when members have different tariff levels against outsiders, for otherwise "imports would come into the FTA through the low-tariff country and be transshipped duty-free into the high-tariff country."

In a world in which production is internationally integrated, however, the bookkeeping costs associated with documenting the national origin of all components in a particular good to prove that the good qualifies for duty-free entry increase sharply. Those costs have risen so dramatically in the case of NAFTA that in exporting to Mexico and Canada some American firms pay the tariff imposed on nonNAFTA countries rather than bear the bookkeeping costs necessary to export duty free. That it is cheaper for firms to trade with tariffs than without suggests that the trade-creating benefits of regional arrangements are being eroded by rising transactions costs. Taken together, those two critiques of the static welfare effects of preferential trading arrangements suggest that the trade diverting effects are likely to be larger and the trade-creating effects are likely to be smaller than proponents of PTAs claim.

As a counter to the PTA momentum, that critique is less than overwhelming: proponents claim that PTAs are a very good second best to free trade; this volume suggests that PTAs are likely to be a less good second best. The weakness of the thesis in this volume stems from the contributors's failure to adequately address what is explicit in the economic theory of PTAs: the theoretical welfare effects of PTAs are ambiguous. Some PTAs will be welfare improving, and some will be welfare diminishing. Therefore, judgements about whether the current shift to regional trading arrangements makes a positive or negative contribution to global welfare must be based on empirical rather than theoretical analysis. Yet, with the exception of a few anecdotes, this book makes no attempt to engage in the empirical analysis of the static welfare implications of current regional trade (in fairness, the proponents of PTAs do no better in that regard). If the point of this debate is to provide well-founded policy advice, then the empirical question must be addressed.

EXPORTING CONSTRAINTS

In addressing the empirical consequences of PTAs, critics would do well to extend their considerations beyond the narrow boundaries of trade creation versus trade diversion and consider also what might be called the "second-order welfare effects" of PTAs. One example taken from the European Union illustrates those second-order welfare effects. Until the late 1980s EU labor-market policies remained the province of national governments. Allowing governments to maintain such control created an environment in which labor markets and other social regulations friendly to inward investment could be instituted. That in turn generated regulatory competition as national governments were forced to adjust market-constraining practices to maintain existing investment or attract new investment. The Thatcher Government pursued that strategy with great success during the 1980s, and Great Britain became the largest European recipient of Japanese foreign direct investment during the decade.

British success made other European governments uncomfortable. The Belgians, for example, had instituted a "social charter" in the 1980s that established labor market constraining regulations. Thatcher's strategy of regulatory arbitrage was forcing them to make an unpleasant choice between letting industries relocate to Britain or reducing labor market regulations to keep industry in Belgium. Not wanting to make either choice, the Belgians, with support from the French and German governments, proposed an EU-wide social charter that would export the Belgian model to the other EU countries, including Britain. Thus, rather than embrace the competitive forces generated by regional integration, European governments have used the EU to extend market constraining regulation over a wider geographic area. That strategy so far has not worked. Under Thatcher and, later, Prime Minister John Major, Britain kept its more market-oriented labor policy. While the Labor Prime Minister has accepted the social charter, it has yet to be seen how much his government will actually change labor law and risk losing foreign investment.

Under NAFTA, environmental groups and organized labor linked their support for the trade agreement to side agreements that exported American environmental and labor regulations to Mexico. But the side agreements have not forced Mexico to change its policies.

Thus, if regulatory expansion fails, the secondary effects can keep pressure on countries (in the above examples, Belgium and the United States) to deregulate. If regulatory extension in response to the competition generated by regional integration succeeds, it imposes deadweight losses that must be set against any trade creation that results from regional arrangements. Because those second order effects appear with a great deal of regularity, they should be incorporated into the analysis of PTAs.

TOWARDS GLOBAL AGREEMENTS?

The second argument this volume marshals concerns the dynamic time path of regional trading arrangements. PTA proponents claim that regional arrangements are not an ultimate destination but a stepping stone to global free trade. An agreement that begins life as a bilateral PTA can be transformed into a trilateral PTA, much as the US-Canada free trade agreement was extended to include Mexico. From there the agreement can be extended into a larger free trade area, just as Clinton is seeking to transform NAFTA into a hemispheric free trade zone.

Trade diversion plays a central role in the logic most often used to explain why a bilateral PTA will be transformed into multilateral free trade. Once a PTA is formed, excluded countries experiencing trade diversion will apply for membership. As new members are admitted, other outsiders experience increasing trade diversion and apply to join. Over time, therefore, the trade diverting consequences of the expanding PTA drives all outsiders to become insiders, and the initial PTA is transformed into a global free trade arrangement. If, in fact, that is the likely path PTAs will follow, then PTA proponents have a powerful case: accepting a second best solution now in exchange for the first best alternative of free trade in the near future would seem to be a reasonable trade-off.

Bhagwati and Panagariya fail to provide a compelling counter to the argument that PTAs can serve as a good stepping stone to global free trade. The book does note that the domino logic brackets the question of why members of the original PTA would agree to admit all countries that apply. But it does not provide a model, or even a convincing argument, about why expansion is unlikely to occur. The volume fails to offer a compelling response because the contributors fail to provide a realistic model of trade politics: why do governments create PTAs in the first place, and what does the logic that leads to their creation suggest about the likelihood of their transformation into a global free trade area?

PTAs are generally created to provide producers with a market that is larger than the national market but sheltered from more efficient foreign producers. The creation of the EU, for example, was motivated by a desire to create a market large enough to generate economies of scale and yet protected from direct competition with American producers. The American shift to PTAs occurred in the mid-1980s, precisely the time at which the American manufacturing industry was facing intense import competition from Japanese producers, and an important motivation for the shift was a desire to generate an advantaged position in Mexico from which to compete against Japanese firms in the American market. Thus, the creation of PTAs is driven by a desire to shelter domestic producers from foreign competition.

Because PTAs are created to provide rents to domestic producers, the expansion of PTAs to include foreign competitors will occur only if domestic producers are willing to give up these rents. Will producers ever agree to give up their rents? Economic theory suggests that rents can be abandoned once domestic industry develops the capacity to compete against foreign producers; the so-called infant industry justification for protection. Yet, in a sheltered market firms have no incentive to make the adjustments necessary to compete against foreign firms. The EU again helps make that point.

European governments agreed in the 1960s to harmonize their agricultural prices at a level sufficient to provide the least efficient producers a high standard of living. High prices predictably led to over-production that generated huge surpluses, which the EU now exports to the rest of the world at a loss (another example of a second order negative welfare effect). The rents that accrue to farmers are so outrageously large that they have no incentive to become more efficient. In defending those rents European farmers have blocked most EU attempts to reform the policy and all efforts to liberalize European agricultural imports.

Even if a sector does become competitive, it is not clear that it has an incentive to forgo the rents provided by a captured market. The behavior of the American steel industry in the late 19th century makes that point. With high tariffs protecting the domestic market from British and German steel imports, American steel producers used higher prices in the domestic market to subsidize below-cost sales into foreign markets and drive foreign competitors out of the industry.

Because trade politics is driven by rent-seeking, claims that PTAs are likely to be transformed easily into global free trade arrangements must be greeted with a great deal of skepticism. In fact, the difficulties involved with overcoming rent-seekers' opposition to the expansion of PTAs are already evident. Two examples are most compelling.

Following the collapse of the Soviet bloc in 1989, several eastern and central European governments indicated their desire to become members of the EU. Given the high degree of complementarity between the EU and east and central European countries, one might expect the amount of trade creation that would result from incorporating those countries into the EU to be quite large. Yet, those countries are most competitive in steel, footwear, textiles, and agriculture, all products in which west European producers are least competitive. Not surprisingly, therefore, EU membership for those countries has been pushed off into the indefinite future.

Closer to home, after having secured passage of the NAFTA, the Clinton administration turned to Congress seeking fast track authority to negotiate Chile's entrance into the regional arrangement. The request was defeated last fall. Because PTAs are unlikely to be transformed easily into global free trade, the welfare implications of these arrangements are of critical importance.

Thus, against the rosy portrait painted by PTA proponents in which regional trade agreements merge seamlessly with global free trade on the not-too-distant horizon, this volume presents a more apocalyptic image in which world trade is divided into welfare diminishing blocks and global free trade is allowed to die from neglect. While the book does a good job sketching the outlines of this more apocalyptic image, it fails to fill in the details. Those details will be necessary to win the intellectual and policy argument.

IMPERFECT ANSWERS FOR THE PERFECT PROBLEM

The Making of Economic Policy: A Transactions Cost Perspective
by Avinash K. Dixit
(M.I.T. Press, 1996) 192 pages.

Reviewed by Michael C. Munger

> It [is impossible] to separate the democratic idea from the theory that there is a mystical merit, an esoteric and ineradicable rectitude, in the man at the bottom of the scale—that inferiority, by some strange magic, becomes superiority—nay, the superiority of superiorities. What baffles statesmen is to be solved by the people, instantly and by a sort of seraphic intuition. This notion . . . originated in the poetic fancy of gentlemen on the upper levels—sentimentalists who, observing to their distress that the ass was overladen, proposed to reform transportation by putting him in the cart. (H.L. Mencken, from *Notes on Democracy*, 1926)

Seems like economic policymaking ought to be easy. In a perfect democracy, citizens choose the economic policies that will improve their lives. But it doesn't always work very well. Policies have complex effects, implementation is difficult, and the whole process is overseen by government agencies with limited accountability and enigmatic methods. Maybe Mencken is justifiably skeptical of the "seraphic intuition" of the mass majority. Perhaps economic activity ought to be off-limits to government regulation, since things are rarely so bad that government can't make them worse.

Still, it is useful to know when government intervention might help an economy, and when it is likely either to fail or do actual harm. In a nutshell, that is Dixit's enterprise in this well-written, persuasively-argued book. He offers a model based on the "transactions cost" of political activity that is meant to surpass standard approaches to the subject. He then applies his approach to two cases and suggests some guidelines for economic policymaking.

AGENCY THEORY

Dixit's starting point is the "principal-agent" (P-A) model. Initially, this model addressed the purely technical problem of how to design contracts to ensure that the interests of agents—e.g. employees and managers—coincide as nearly as possible with the goals of their principals—e.g. employers and shareholders. The only "transaction costs" of interest in early P-A theory were the costs of writing the contract itself and monitoring compliance with its terms.

Today, scholars recognize many complex problems with P-A arrangements and a vast literature addresses those problems. Also, today P-A theory is used extensively in the study of policy formulation and implementation. Dixit uses the P-A metaphor:

Michael C. Munger is Associate Professor of Political Science, Duke University and President of the Public Choice Society.

"I will argue that the political process should be viewed as a game between many participants (principals) who try to affect the actions of the immediate policymaker (agent)." But he recognizes that the approach may not lead to any grand conclusions: "The equilibrium of the game of policymaking will typically not maximize anything. Any attempts to design, or even identify the desiderata of, a truly optimal system are doomed to failure, and no grand or general results about the superiority of one organizational form over another can be expected."

DIXIT'S ASSUMPTIONS

Dixit asserts four axioms as starting points for his discussion:

- Markets and governments are imperfect—and not perfectible—institutions.
- Markets and governments are both unavoidable, since there are no other feasible institutional mechanisms for carrying out the functions of organizing exchange and organizing a state.
- The operation of each of those two basic institutional forms is powerfully influenced by the existence and operation of the other.
- Both markets and government evolve in complex ways, possibly spontaneously or unpredictably, in response to "surprises" or exogenous events.

Dixit points out that although those assumptions are innocuous, they have rarely been taken as a starting point for modeling. He claims that neither of the two extant theoretical perspectives, "normative" or "positive" models, account fully for all four assumptions. The goal of Dixit's "transactions cost politics" approach is to unify existing work.

The normative approach (associated, for example, with Paul Samuelson's "social welfare function") is actually the more technical of the two classical theories. With that approach, a theory specifies certain goals to be achieved and criteria for judging success. Then, given a model of the economy, with access points for policy, the theory seeks to discover which policies will achieve the goals and meet the criteria. The advantage of that approach, say its advocates, is that it is untouched by human politics.

If the normative approach is apolitical, the positive approach seems to operate in a world where politics has never even existed. That approach would describe John Rawl's theory or the public choice theory of James Buchanan. By its lights, governments should set generic rules that will govern the actions of individuals in social and economic intercourse, and let society and economy roll along accordingly. And even those rules are not a matter "choice," which could imply normative decisions. Instead, a purely positive view posits unanimous agreement on certain generic ends.

One problem seems to be that many positive theorists have identified a different, but to them obviously correct, set of rules. Dixit recognizes that irony, but also notes that the positive view may have some merit. In fact, "one must recognize the possibility that many economists find Buchanan's views unpalatable because their triumph would leave economists with little to do." In offering his "hybrid" alternative, Dixit is not taking sides, since neither side has it exactly right. But he seems quite sympathetic to the positive view, and in many ways seems to have set himself, as one of his goals in writing this book, the task of clarifying and refining the positive thesis using a more complete and more rigorous model.

THE TRANSACTIONS COST SYNTHESIS

In many ways, Dixit is taking Buchanan's positive or "public choice" theory of constitutions as a starting point. But he immediately points out that the approach is inadequate, since constitutions are necessarily incomplete contracts. For all the usual reasons, and some uniquely political ones, it is impossible or very costly to specify contingencies for all possible states of the world in which the society might find itself.

Further, constitutions are not written behind a "veil of ignorance," as the positive approach requires. They are written by interested but not perfectly informed parties, just like other specialized economic contracts. Dixit argues that there are two essential features of constitutions, at least for economists: (1) A set of specific rules for future actions that can be foreseen at the time the constitution is written, and (2) A specific set of dispute settlement procedures to be followed in all cases not clearly dealt with by the constitution.

Most of the model is relegated to the appendix on "Multiprincipal, Multitask Agencies." The model seems straightforward enough, but that likely reflects Dixit's great talent as a theorist: the ability to make difficult things seem obvious is surely the hallmark of deep understanding. The appendix is only fifteen pages, but is worth the price of the book. It may be years before all the implications of the formal model are understood and explored.

FISCAL POLICY AND TRANSACTIONS COSTS

Dixit first tries to show the value of his approach by applying it to American fiscal policy. The three key goals of such policy are: larger expenditures, lower taxes, and balanced budgets. Those are obviously incompatible; the puzzle is why balancing the budget is of the highest priority, even though, until this year, budgets have had no prayer of being balanced. Dixit's answer is this:

> The transaction-cost view of the political process points to a need to look deeper and to identify the true underlying political problems. . . . Why were the problems allowed to occur, and why did they last so long? The answer must be that the currently dominant forces in the political process wanted just those outcomes and quite deliberately installed or persevered with those outcomes. . . . If procedural reform is enacted without underlying political support, the real forces will find a way round the reform, and the attempt will fail.

As my eight-year-old son would say, "Well, like, duh-ah!" It is hard to say why an elaborate "transactions cost" model is required to explain that: (1) it happened because elites wanted it; and (2) it continued because elites liked it. Even a simple

Stiglerian view has a more specific prediction: look to the wealth created by the current "bad" policy, and those benefits create support for maintaining that policy. Dixit has to do better. Dixit does. Indeed, he generates important and nonobvious insights when dealing with his second case the General Agreement on Tariffs and Trade (GATT).

GATT AND TRANSACTION COSTS

The puzzle is to explain why such a strange and weak "organization" as GATT has been so successful. Dixit offers four reasons. First, the constitution of GATT approximates the positive theorists' ideal: generic rules that facilitate the generic goal of trade liberalization. That arrangement was chosen by member nations because no one expected GATT to be a permanent or adaptive organization at all. It was a substitute for the more ambitious International Trade Organization that in the 1940s did not secure political support in the United States and elsewhere. For that reason, and because trade relationships and economic conditions change unpredictably, the "veil of ignorance" really did mask winners and losers, leading to simple and workable rules.

Second, GATT is weak, with little effective enforcement. Strong enforcement procedures might have been resisted, or even flouted, by economically powerful nations. The threat of enforcement is not credible without the power to enforce, and attempts to create such power in the abortive ITO or the current World Trade Organization have consistently failed. That is because signatories are members only in the sense that they hope to gain something by observing loose norms. The effective restraints on noncooperative action are actually stronger than they would be if real sanctions were agreed to but never enforced.

Third, Dixit shows the role of "first best" versus "second best" in GATT enforcement rules. In any system, he argues, if the actual variable or issue of concern is not observable, then it is second best to focus on a correlated measure that is observable. Any agent's output is a mix of effort and chance; if effort cannot be observed, then some other measurable alternative, for example, customer orders secured—recognizing that the agent has less than complete control—can be substituted. But if the second best solution is chosen, then the power of the incentive scheme should not be too great, lest the agent be given strong incentives to cheat.

In the case of GATT, the goal is to reduce the tariffs and other barriers that shield domestic markets in all nations, thereby opening the world economy. The incentive is for each nation to cheat by erecting hidden barriers. It is tempting to substitute outcome measures, since "effective" protection may be hard to observe. For example, the United States has argued that Japan has a complex, largely hidden, but very effective system of controls to exclude foreign products. Since they are not directly observable, the appropriate measure would be the total of imports from the United States. But using imports as a measure of Japanese compliance raises a clear problem: American firms could cheat by insisting that Japan buy low quality, poorly marketed products that Japanese consumers do not want.

GATT has avoided that problem by focusing on "first best," rule-based measures that focus not on outcomes but on trade policies. Countries argue about what the rules really are and about how high effective barriers have been raised but avoid the problem of moral hazard for the plaintiff nation. Consequently, domestic policies are more protected by GATT than if "output" measures were used. Ultimately, more members continue to participate.

Finally, there are escape clauses and other ways out of even the minimal restrictions GATT does impose. In particular, while nontariff barriers are frowned on, sanctions against such practices are rarely imposed. Again, this weakness is actually a strength since "there is a limit to the extent of cooperation that can be self-enforcing." Because nations can satisfy their domestic political needs and still remain members of the organization, the organization exerts more effective control over noncooperative behavior than if nations were forced to become outlaws: "Unless the system allows a limited amount of backsliding on these occasions without triggering collapse of the agreement, it cannot be sustained in equilibrium."

DIXIT'S SHORTFALLS

Though Dixit's exposition of the issues is unusually clear, and the analysis very interesting, the book ultimately does not accomplish its object of establishing a new synthesis in the political economy of economic regulation. In criticizing the normative approach, Dixit correctly asserts:

> In reality, a policy proposal is merely the beginning of a process that is political at every stage—not merely the process of legislation, but also the implementation, including the choice or formation of an administrative agency and the subsequent operation of this agency.

Fair enough. But Dixit falls into his own trap by ignoring the political problem of deciding, quite apart from the economic problem of doing. He seems to assume that with the proper model any conflict can be resolved to the satisfaction, however incomplete, of all the parties involved without coercion. That is the assumption about consensus of goals for which positivist theorists can be criticized. Indeed, there is a whole social choice literature, associated with Kenneth Arrow and others, that shows that it may be impossible for democracies to operate without conflict.

Dixit repeats the error most notably made by the eighteenth century French thinker, Jean-Jacques Rousseau, of assuming that if all individuals would just do the right thing—control their self-interest and appetites—that everything would be just great. In this view, we still might disagree initially about which policy is best. But since disagreements are based on differences in information, study and deliberation would bring consensus. Social choice theory as well as history calls that assumption into question.

It is appropriate to close with Mencken. He believed that attempts to make "good" economic policy were far more likely to be amusing than effective.

It may turn out that rascality is an ineradicable necessity to human government, and even to civilization itself—that civilization, at bottom, is nothing but a colossal swindle. . . . What I can't make out is how any man can believe in democracy who feels for and with [common citizens], and is pained when they are debauched and made a show of. How can any man be a democrat who is sincerely a democrat? (H.L. Mencken, Notes on Democracy, 1926.).

INVASION BY WIRE

Foreign Investment in American Telecommunications

by J. Gregory Sidak.

(University of Chicago Press) 443 pages

Reviewed by Paul Teske

National regulatory policy issues are increasingly becoming intertwined with aspects of international trade and investment. Telecommunications is one of the industries at the leading edge of this trend, especially as more foreign companies are transformed from state-owned monopolies to private firms. While American policymakers have sought fair access to telecommunications markets in other countries for more than a decade, with mixed success, American policies that are often unexamined have hindered foreign investment in our own telecommunications markets. In his impressive volume, Sidak argues that American consumers and producers alike have been harmed by those policies with few countervailing benefits.

RATIONALIZING RESTRICTIONS

In the United States, limits placed by the federal government on foreign investments in important infrastructure industries such as telecommunications frequently are defended on the grounds of national security. What would happen in a war if a foreign firm owned important domestic communications or network facilities needed for the conduct of the conflict? Sidak traces that argument, initially related mainly to the American Navy and radio policy, back at least to the Russo-Japanese war of 1904. He illustrates in some detail that these arguments are usually specious, and that national security has not, in fact, been protected by preventing foreign firms from involvement in these industries. Instead, even Pearl Harbor showed that encryption is a more serious concern than actual ownership of facilities. Further, in an era of increasingly mobile capital and international markets, the very concept of what constitutes foreign ownership becomes less clear and less relevant.

While Congress created limitations on foreign investment in telecommunications firms for national security and perhaps other purposes in Section 310(b) of the 1934 Communications Act, legislative approaches have not been consistent. Indeed, provisions initially were discussed, but were dropped, in the 1996 Telecommunications Act that would have made telecommunications ownership issues part of bilateral trade negotiations. Instead, Congress in 1996 did allow foreigners to serve as managers of firms with radio licenses while prior ownership limitations were retained

Of course, Congress sets broad policy directions and agencies implement policy. But Sidak argues that, over time, the Federal Communications Commission (FCC) has interpreted the foreign ownership provisions in an arbitrary, inappropriate, and counterproductive manner. The FCC has expanded its jurisdiction to cover a wide array of issues that stray far from the original conception that lawmakers had of that agency. That growth of power has created unnecessary costs for telecommunications firms.

OPENING TO INVESTMENTS

Sidak discusses both the simple and more complex arguments about the benefits of free trade and shows how limits on foreign ownership have reduced economic welfare of Americans. Attempts to use foreign ownership limitations in a reciprocal manner to open other markets to American investments have not been productive and no longer can be used as a tool in light of the 1997 World Trade Organization (WTO) agreement to open all telecommunications markets. Indeed, American foreign ownership limitations have provided foreign governments with excuses to limit the ability of American firms to compete abroad. Given the growing expertise and competitive advantages of many American firms in this dynamic industry, domestic policies limiting foreign investments have harmed firms as well as consumers.

Furthermore, Sidak in one detailed chapter argues that 310(b) of the 1934 Act impinges on electronic free speech rights. I feel less qualified to examine the legal analysis than the economic arguments. But it does illustrate a strength of Sidak's approach—he is able to integrate very high levels of both legal and economic analyses in this book.

All of the problems with foreign ownership limitations suggest that Congress should repeal that portion of the Telecommunications Act; the 1997 WTO agreement provides just such an opportunity. If any particular argument does not compel the reader to conclude that regulatory costs are high and benefits few, another argument soon follows that does persuade. By the end of the book most readers will agree with Sidak's simple conclusion: "In sum, the foreign ownership restrictions epitomize the worst of American regulation."

Sidak provides a wealth of detailed information in this book. He illustrates the tortured FCC and judicial decision making processes in several recent case studies where foreign firms tried to purchase large ownership interests in American firms, including British Telecom/MCI, British Telecom/McCaw, Bell Canada Enterprises/Jones Intercable, and News Corporation/Fox Television Stations. As a former FCC official, Sidak knows and explains the decisions in those cases clearly and thoroughly.

Paul Teske is associate professor of political science, SUNY Stony Brook and Affiliated Research Fellow, Columbia University Institute for Tele-Information.

The one problem with such a book is that topical issues change rapidly. To be sure, Sidak is providing policy advice to Congress and the FCC. But some of the detail on recent cases and proposed legislation may become less relevant over time. The issues related to the WTO agreement in 1997 appear to have been added by Sidak as he was writing the book. Given that, they are integrated extremely well, and their inclusion is critical. It does illustrate, however, the problems with trying to keep up with a topic that is moving so fast.

An additional bonus that the book provides is an Appendix to Chapter 3 that summarizes what American restrictions on foreign ownership exist for other industries, such as air transportation, shipping, banking, mining, fishing, and energy. While the rest of the book is devoted to telecommunications, this appendix confirms the more general point that regulatory and trade/investment policy will continue to intersect in several venues and that successful market-oriented reforms must address both international agreements and domestic restrictions.