

National Goods Versus Public Goods: Defense, Disarmament, and Free Riders

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Of all the functions of the State, the one generally considered essential above all others is national defense. According to the popular ideal, national defense is a service provided by the State to its citizens. This service entails protection from aggressors outside the State's jurisdiction, usually foreign States. The most sophisticated theoretical justification for State provision of this service is the public-goods argument. Economists have called many things public goods and then endlessly debated whether the label really applies, but national defense has remained the quintessential public good. Although rarely discussed in detail, it is universally invoked as the classic representative of the public-goods category.¹

As the public-goods argument has been refined by economists, two characteristics distinguish a pure public good from a private good

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¹By "the State" I mean government. I use the two terms interchangeably, unlike many political scientists, who use the term the "State" either for what I am calling the "nation," the government plus its subjects, or for some vague intermediate entity which is less than the entire nation but more than just the government. I capitalize the word "State" to distinguish it from constituent states within a federal system of government like that of the United States.

Examples of economists treating national defense as the quintessential public good are so abundant as to be almost not worth citing. Nevertheless, I shall mention a few. Paul A. Samuelson, in his once standard text, *Economics*, 10th ed., with Peter Temin (New York: McGraw-Hill, 1976), p. 159, refers to "national defense as an example pa-

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The first is *non-rival consumption*. One customer's consumption of a marginal unit of the good or service does not preclude another's consumption of the same unit. For example, in an uncrowded theater, two patrons' enjoyment of the same movie is non-rival. The second characteristic is *non-excludability*. The good or service cannot be provided to an individual customer without simultaneously providing it to others. The owner of a dam, for example, cannot provide flood control separately to the individual farmers residing downstream.²

Although these two characteristics frequently come in conjunction with each other, they do not necessarily have to. The non-

excellence of public goods." James M. Buchanan and Marilyn R. Flowers, *The Public Finances: An Introductory Textbook*, 4th ed. (Homewood, Ill.: Richard D. Irwin, 1975), p. 27, state "[d]efense against external enemies seems to fall squarely within the collective goods category." John G. Head and Carl S. Shoup, "Public Goods, Private Goods, and Ambiguous Goods," *Economic Journal* 79 (September 1969): 567, speak of the "extreme [public-good] cases, such as that of national defense ..."

Among the few attempts of economists to look in any detail at national defense as a public good are Earl A. Thompson, "Taxation and National Defense," *Journal of Political Economy* 82 (July/August 1974): 755-82, and R. Harrison Wagner, "National Defense as a Collective Good" in Craig Liske, et al., William Loehr, and John McCamant, eds., *Comparative Public Policy: Issues, Theories, and Methods* (New York: John Wiley and Sons, 1975), pp. 199-221. Thompson's article is a formal attempt to find the most efficient tax structure for national defense, based on the assumption that the need is a function of wealth, and has little in common with my approach. The Wagner article is a utility function analysis of the demand for national defense, and I will have occasion to mention it below.

After national defense, the lighthouse was probably economists' favorite public good, that is, until Ronald H. Coase, "The Lighthouse in Economics," *Journal of Law and Economics* 17 (October 1974): 357-76, demonstrated that historically lighthouses had been privately provided. Despite his demonstration, economists have not completely abandoned this example.

²Paul A. Samuelson's two classic articles, "The Pure Theory of Public Expenditure," *Review of Economics and Statistics* 36 (November 1954): 387-89, and "Diagrammatic Exposition of a Theory of Public Expenditure," *ibid.* 37 (November 1955): 350-56, are generally credited as being the first formal statements of modern public-goods theory. They, like all of Samuelson's articles that I shall cite, are reprinted in *The Collected Scientific Papers of Paul A. Samuelson*, vol. 2, Joseph E. Stiglitz, ed. (Cambridge, Mass.: M. I. T. Press, 1966) or vol. 3, Robert C. Merton, ed. (Cambridge, Mass.: M. I. T. Press, 1972).

Several economists, however, had anticipated Samuelson. Indeed, Adam Smith, in *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776; reprint, New York: Random House, 1937), bk. 5, *passim*, particularly pp. 653-56, 681, presents a brief and crude statement of public-goods theory, giving national defense as an example. The most notable contributions of a largely neglected public-goods tradition among Continental economists were finally collected, translated, and reprinted in Richard A. Musgrave and Alan T. Peacock, eds., *Classics in the Theory of Public Finance* (London: Macmillan, 1958). See particularly Knut Wicksell, "A New Principle of Just Taxation" (1896), pp. 72-118 and Erik Lindahl, "Just Taxation—A Positive Solution" (1919), pp. 168-76. An English presentation that pre-dated Samuelson's was by Howard R. Bowen, in "The Interpretation of Voting in the Allocation of Resources," *Quarterly Journal of Economics* 58 (November 1943): 27-48, and *Toward Social Economy* (New York: Rinehart, 1948).

excludability from the dam's flood-control services is accompanied by non-rival consumption of the services among the various farmers but the owner of a nearly empty theater can still exclude additional patrons. Yet, according to the public-goods argument, either characteristic alone causes "market failure"—that is, an allocation of resources that is less than Pareto optimal. Thus, either can be sufficient to justify State intervention.

Much of the literature on public goods has conceded that, strictly speaking, very few actual goods or services exhibit either of these characteristics in their polar form. Instead, in the real world, we encounter a range of goods and services, for which the potential capacity and quality of non-rival consumption is increasing or fo-

Important further developments in public-goods theory include Paul A. Samuelson "Aspects of Public Expenditure Theories," *Review of Economics and Statistics* 41 (November 1958): 332-38; Richard A. Musgrave, *The Theory of Public Finance: A Study in Public Economy* (New York: McGraw-Hill, 1959); and William J. Baumol, *Welfare Economics and the Theory of the State*, 2nd ed. (Cambridge, Mass.: Harvard University Press, 1965).

Samuelson's initial presentation focused only upon non-rival consumption. The distinction between the two public-goods characteristics was not fully clarified until John G. Head, "Public Goods and Public Policy," *Public Finance* 17 (1962): 197-219 reprinted with other of the author's essays on the same subject in Head, *Public Good and Public Welfare* (Durham, N.C.: Duke University Press, 1974), pp. 164-83. The first full text devoted to public goods was James M. Buchanan, *The Demand and Supply of Public Goods* (Chicago: Rand McNally, 1968), which contains extensive bibliographic references to the previous literature. For a more recent summary of the still sometimes confusing concepts surrounding public goods, see Duncan Snidal, "Public Goods, Property Rights, and Political Organizations," *International Studies Quarterly*, 23 (December 1979): 532-66.

The public-goods literature is terminologically over-endowed. "Public goods" are also called "collective goods" (Samuelson) and "social goods" (Musgrave). "Non-rival consumption" is also called "joint consumption" (Musgrave), "joint demand" (Samuelson), "joint supply" (Head), "indivisibility" (Buchanan), and "non-exhaustiveness" (Brubaker). Except for the fairly rare "non-marketability," the variations for "non-excludability"—"non-exclusiveness" and "non-exclusivity"—at least maintain the same root, and although as I note below, "external economies" or "positive externalities" are related, they are still distinct enough to justify a separate term.

Harold Demsetz, "The Private Production of Public Goods," *Journal of Law and Economics* 13 (October 1970): 293-306, makes a distinction between the terms "public good" (a good or service exhibiting non-rival consumption) and "collective good" (a good or service exhibiting both non-rival consumption and non-excludability). Perhaps the high-point in obscure public-goods terminology is reached in Carl S. Shoup, *Public Finance* (Chicago: Aldine, 1969), pp. 66-74, which labels goods with non-rival consumption as "collective-consumption goods" and those with non-excludability as "group-consumption goods." You can imagine how the poor reader must fare with only the huge difference between "collective" and "group" to navigate him through Shoup's turgid explanation. Despite all that, Shoup's treatment is exemplary because he remains the only economist, to my knowledge, not to classify national defense as a public good. Anticipating some of my argument, he puts it in a separate category altogether "preservation of the nation-state."

which the costs of exclusion are increasing.³ Indeed, some economists have gone so far as to suggest that these characteristics are almost never physically inherent in any good or service, but are rather nearly always a consequence of choosing one out of many feasible methods for producing the good or service.⁴

While I believe that this argument has much merit, I am not going to challenge the validity, realism, or relevance of the public-goods concept. On the contrary, I think that the core service within national defense captures the essence of a public good more fully than economists

³Of the four possibilities that the two public-goods characteristics generate, economists have had the most difficult time identifying real-world examples of goods or services that are non-excludable but nevertheless rival in consumption. Some attempts include: use of a neighbors blossoms by the bees of competing bee-keepers; travel on crowded freeways; extraction of oil from underground oil fields; and theft of automobiles. All of these examples, however, with the possible exception of the blossoms, represent goods or services that could be easily made excludable with a better definition or protection of property rights.

Tyler Cowen, "Public Goods Definitions and Their Institutional Context: A Critique of Public Goods Theory," *Review of Social Economy* 43 (April 1985): 53-63, and Snidal, "Public Goods, Property Rights, and Political Organizations," argue that non-excludability logically implies non-rival consumption. Snidal, however, arrives at this conclusion partially through a definitional sleight of hand. He invents a new term, "noncontrol over exclusion," which he distinguishes from "nonexclusiveness." The new term retains, under a slightly different name, an exclusion characteristic that can vary independently of non-rival consumption, whereas the older term becomes synonymous by definition with a public good exhibiting both characteristics.

Many of the early criticisms of Samuelson's original public-goods articles zeroed in on the polarity of his concept. For instance, see Stephen Enke, "More on the Misuse of Mathematics in Economics: A Rejoinder," *Review of Economics and Statistics* 37 (May 1955): 131-33; Julius Margolis, "A Comment on the Pure Theory of Public Expenditure," *ibid.* 37 (November 1955): 347-49; and Gerhard Colm, "Comments on Samuelson's Theory of Public Finance," *ibid.* 38 (November 1956): 408-12. Samuelson, himself, admitted this feature in his second article, "Diagrammatic Exposition of a Theory of Public Expenditure."

The development of a more sophisticated approach can be traced through James M. Buchanan and M. Z. Kafoglis, "A Note on Public Good Supply," *American Economic Review* 53 (January 1963): 403-14; Harold Demsetz, "The Exchange and Enforcement of Property Rights," *Journal of Law and Economics* 7 (October 1964): 11-26; Jora R. Minasian, "Television Pricing and the Theory of Public Goods," *ibid.* 7 (October 1964): 11-80; R. N. McKean and Jora R. Minasian, "On Achieving Pareto Optimality—Regardless of Cost," *Western Economic Journal* 5 (December 1966): 14-23; Otto Davis and Andrew Winston, "On the Distinction Between Public and Private Goods," *American Economic Review* 57 (May 1967): 360-73; E. J. Mishan, "The Relationship Between Joint Products, Collective Goods, and External Effects," *Journal of Political Economy* 77 (May/June 1969): 329-48; and Head and Shoup, "Public Goods, Private Goods, and Ambiguous Goods."

⁴See Cowen, "Public Goods Definitions and Their Institutional Context"; Tom G. Palmer, "Infrastructure: Public or Private?" *Policy Report* 5 (May 1983): 1-5, 11; Murray N. Rothbard, "The Myth of Neutral Taxation," *Cato Journal* 1 (Fall 1981): 532-46; and Kenneth D. Goldin, "Equal Access vs. Selective Access: A Critique of Public Goods Theory," *Public Choice* 29 (Spring 1977): 53-71.

To some extent, this position was anticipated by Earl Brubaker, "Free Ride, Free

have ever appreciated. But this essential feature, rather than providing a solid justification for State provision of the service, offers on of the most powerful objections to such provision.

National defense as it is provided by the State certainly exhibit both public-good characteristics to a substantial extent. True, Americans in Alaska and Hawaii could very easily be excluded from the United States government's defense perimeter, and doing so might enhance the military value of at least United States conventional forces to Americans in the other 48 states. But in general, an additional ICBM in the United States arsenal, insofar as it truly protect one American, can simultaneously protect everyone else within the country without diminishing its protection. In that respect, consumption of national defense is non-rival. Moreover, a technique that defend just a single American from the Soviet State without necessarily defending his or her entire community and perhaps the entire nation is difficult to visualize. That makes national defense non-excludable as well.

I am going to focus, however, only upon non-excludability. If consumption of a service is non-rival, but businessmen and entrepreneurs can exclude those who do not pay for it, then they still have strong incentives to provide the service. The most serious "market failure" that is alleged to result is under-utilization of the service. Some people will be prevented from benefiting from the quantity of the service that has been produced, even though permitting them to do so costs nothing. Furthermore, even this imperfection will dissipate if the market permits discriminatory pricing.⁵

On the other hand, non-excludability creates opportunities for free riders, who will pay for the service only if doing so is absolutely necessary to receive it. From the perspective of economic self-interest, every potential customer has an incentive to try to be a free rider. If enough of them act on this incentive, the service will not be produced at all, or at least not in an optimal quantity.

Revelation, or Golden Rule," *Journal of Law and Economics* 18 (April 1975): 147-6. Brubaker argues that what he calls "pre-contract excludability" allows the market in many cases to overcome the free-rider problem. "Pre-contract excludability" involves contractually obligating recipients of the public good to pay on the condition that specified number of other recipients pay. The entrepreneur does not produce the public good until the requisite number of recipients agree to the contract.

⁵I have slightly simplified the alleged "market failure" from non-rival consumption with excludability. The quantity of the public good could also be non-optimal, although economists have not yet determined in exactly which direction. To the extent that different competitors produce redundant quantities of the public good for those customers willing to pay the market price, there will be over-production in addition to under-utilization. To the extent that producers cannot capture the returns from those potential customers who would be willing to pay something less than the market price there will be under-production.

Another way to think about non-excludability is as a positive externality in its purest form. Many goods and services generate additional benefits for people other than those who directly consume and pay for them. There is often no way for the producers of these goods to charge those who receive these external benefits. A non-excludable good or service is one where the positive externalities are not just an incidental by-product but rather constitute the major benefit of the good or service.⁶

Clearly, the justification for State provision of national defense does not stem from any major concern that protection services would be produced but under-utilized on the free market. Rather, it stems from the assumption that, unless taxation or some other coercive levy forces people to contribute, national defense would be inadequately funded and therefore under-produced. It is this widely held but rarely examined assumption that I wish to question.

These supposed problems have led some economists to identify non-rival consumption with excludability as a special case of decreasing cost or of economies of scale. See Samuelson, "Aspects of Public Expenditure Theory"; Head, "Public Goods and Public Policy"; and Davis and Winston, "On the Distinction Between Public and Private Goods." This occasionally leads to the policy suggestion of providing such public goods through legal monopolies rather than through State financing. However, Snidal, "Public Goods, Property Rights, and Political Organizations," strongly contests this identification by making a sharp distinction between the marginal cost of producing the good or service in the first place and the marginal cost of extending consumption to additional consumers. This distinction is also found in Buchanan's *Demand and Supply of Public Goods*, pp. 186-87.

The definitive demonstration of the ability of the market, with discriminatory pricing, to provide non-rival, excludable goods and services is Demsetz, "The Private Production of Public Goods." This possibility first became dimly appreciated when Carl S. Shoup, "Public Goods and Joint Production," *Rivista internazionale di scienze economiche e commerciali* 12 (1965): 254-64, and James M. Buchanan, "Joint Supply, Externality, and Optimality," *Economica* (November 1966): 404-15, noticed the analogy between non-rival consumption and the Marshallian concept of joint production, e.g., mutton and wool from a common unit of sheep. Paul A. Samuelson, "Contrast Between Welfare Conditions for Joint Supply and for Public Goods," *Review of Economics and Statistics* 51 (February 1969): 26-30, unpersuasively disputed the import of this analogy. Earl A. Thompson, "The Perfectly Competitive Production of Collective Goods," *ibid.* 50 (February 1968): 1-12, admitted that discriminatory pricing was possible on the market, but with a faulty model tried to show that the result was over-production of the public good.

John G. Head concludes that the major justification for government intervention, not just in the case of national defense, but in the case of all public goods, "will be found to derive fundamentally from the non-excludability elements rather than from generalized joint supply problems." See "Public Goods: The Polar Case," in Richard M. Bird and John G. Head, eds., *Modern Fiscal Issues: Essays in Honour of Carl S. Shoup* (Toronto: University of Toronto Press, 1972), p. 16.

⁶Samuelson, in a later article, "Pure Theory of Public Expenditure and Taxation," in J. Margolis and H. Guitton, eds., *Public Economics: An Analysis of Public Production and Consumption and their Relations to the Private Sectors* (London: Macmillan, 1969), pp. 98-123, advanced an astonishing revised definition of public goods: "A public good

I

Before I directly address the public-goods justification for State provision of national defense, we must clarify the meaning of the term "national defense." The public-goods justification rests upon a fundamental equivocation over exactly what service "national defense" entails.

When economists discuss national defense, the core service they usually have in mind, explicitly or implicitly, is protection of people's lives, property, and liberty from foreign aggressors. This also appears to be what people have in mind when they fear foreign conquest, particularly in the case of the American fear of Soviet conquest. People throughout the world apparently believe that their own government, no matter how disagreeable, defends them from foreign governments, which they think would be even more oppressive.

This defense of the people is not synonymous with another service that goes under the same "national defense" label: protection of the State itself and its territorial integrity. Logically, there is no necessary relationship between the two. The defense of the people and the defense of the State are conceptually distinct. Imagine a society without a State. Whereas it would no longer have a State to protect, the people might still need some protection from foreign States.⁷

Historically, the State often embarks on military adventures unrelated to the defense of its subjects. If this were not the case, people would require no protection from foreign States in the first place.

... is simply one with the property of involving a 'consumption externality,' in the sense of entering into two or more persons' preference functions simultaneously. ... What are we left with? Two poles and a continuum in between? No. With a knife-edge pole of the private-good case, and with *all* the rest of the world in the public-good domain ... [Emphasis his]."

Thus, Samuelson defined every single case of positive externalities in consumption as a public good. Snidal, "Public Goods, Property Rights, and Political Organizations," in contrast, articulates the position that I take, and most of the economists cited on public goods in the notes above are closer to me than to Samuelson. Head's collection, *Public Goods and the Public Welfare*, pp. 184-213, reprints a useful survey article on externalities, "Externality and Public Policy"; Buchanan's *Demand and Supply of Public Goods*, p. 75, offers a brief bibliographic essay on the subject; while Shoup *Public Finance*, pp. 96-98, and Mishan, "The Relationship Between Joint Products, Collective Goods, and External Effects," explicitly discuss the relationship between externalities and public goods.

⁷David Friedman, in his defense of anarcho-capitalism, *The Machinery of Freedom: Guide to Radical Capitalism* (New York: Harper and Row, 1973), pp. 188-89, makes this point, yet without quite identifying the distinction between the two forms of national defense. "One ... argument is the assertion that national defense is unnecessary in an anarchist society, since there is no nation to defend. Unfortunately, there will still be nations to defend against, unless we postpone the abolition of our government until anarchy is universal."

Many Americans still seriously doubt that the United States' bombing of North Vietnam and Cambodia had very much to do with protecting their liberty. One defense-budget analyst, Earl Ravenal, believes that nearly two-thirds of the United States government's military spending goes toward the defense of wealthy allied nations in Europe and Asia and has little value for the defense of Americans.⁸

The distinction between the two meanings of national defense does not only apply when the State engages in foreign conquest, aggression, or intervention. Even during unambiguously defensive wars, the State sacrifices the defense of its subjects to the defense of itself. Such universal war measures as conscription, heavy taxation, rigid economic regulation, and suppression of dissent aggress against the very citizens whom the State is presumably protecting. People believe the State defends their liberty; in fact, they end up surrendering their liberty to defend the State. This is the frequently overlooked cost of the State's protection captured so aptly in Randolph Bourne's famous observation: "War is the health of the State."⁹

Of course, people may be better off accepting the costs and risks of the State's protection in order to reduce the risks and costs of foreign conquest. I do not deny the possibility of an incidental relationship between the defense of the State and the defense of the people. But the next section will present theoretical reasons why this

⁸Earl C. Ravenal, *Defining Defense: The 1985 Military Budget* (Washington, D.C.: Cato Institute, 1984). Public-goods theorists do occasionally admit that not all of the State's military necessarily goes to defending the people, but they generally attach no theoretical significance to the admission. For instance, see Buchanan and Flowers, *The Public Finances*, pp. 27-28.

⁹Randolph Bourne's famous observation first appeared posthumously in an essay under the title "Unfinished Fragment on the State," in James Oppenheim, ed., *Untimely Papers* (New York: B. W. Huebsch, 1919), pp. 140-53. A later version of the essay that restored Bourne's original sequence, under the title "The State," was included in Carl Resek, ed., *War and the Intellectuals* (New York: Harper and Row, 1964), pp. 64-104.

A general substantiation (or refutation) of Bourne's observation has so far not attracted the professional energies of any historian, perhaps because they feel no need to belabor the obvious. There are lots of studies showing the growth of the State's power in particular countries during particular wars, but very few that even treat a single country during more than one war, or more than a single country during one war. A few exceptions that have come to my attention include: Clinton Rossiter, *Constitutional Dictatorship: Crisis Government in Modern Democracies* (Princeton: Princeton University Press, 1948), a comparison of the U.S., Britain, France, and Germany during the twentieth century that concludes that the U.S. has the least bad record; Arthur A. Ekirch, Jr., *The Civilian and the Military: A History of the American Antimilitarist Tradition* (New York: Oxford University Press, 1956), which is primarily interested in American antimilitarist movements, but in the process gives a sketchy account of war's impact upon the U.S. government's power; Robert Higgs, *Crisis and Leviathan: Critical Episodes in the Emergence of the Mixed Economy* (New York: Oxford University Press, 1987), which also covers the U.S.—during the twentieth century—arguing that the mixed economy is primarily a product of war; and Charles Tilly, ed., *The Formation*

relationship is not as common nor as strong as generally supposed. Before doing that, I must fully expose the conceptual gulf between the two meanings of national defense.

Unfortunately, the pervasive doctrine of nationalism obscures this fundamental distinction. Nationalism treats nations as collective entities, applying principles drawn from the analysis of individual interaction to the international level. In a war between two nations, the nationalist model focuses on essentially two parties: nation A and nation B. As in fights between individuals, one of these two nations is the aggressor, whereas the other is the defender. As a result, the model axiomatically equates protecting the State with protecting its subjects.

The basic flaw in the nationalist model is its collectivist premise. Although the model informs many of the formal economic analyses of international relations, it represents a glaring example of the fallacy of composition. Nations consist of two related but distinct elements: the State and its subjects. Democracies are sometimes referred to as "governments of the people," but this is, at best, rhetorical sloppiness. The State and the people interact, whether under democracies or other forms of government, in important ways that we shall soon explore, but this obvious fact should not confuse us about the inherent difference between a police officer and an ordinary citizen.

Consequently, any conflict between two nations involves not just two parties, but at least four: the State governing nation A, the State governing nation B, the people with the (mis)fortune to live under State A, and the people with the (mis)fortune to live under State B. Whatever the merits of a dispute between State A and B, the dispute need not involve a significant portion of people A or people B.¹⁰

Abandoning this collectivist identification of the State with its subjects exposes the critical insight about the national-defense service. If one is truly concerned about defense of peoples' lives, property and liberty, then the transfer of their capital city from one location to another is not intrinsically significant. The territory constituting the United States is in a very real sense already conquered—by the

of *National States in Western Europe* (Princeton: Princeton University Press, 1975), as well as Tilly, "War Making and State Making as Organized Crime," in Peter B. Evans, Dietrich Rueschemeyer, and Theda Skocpol, eds., *Bringing the State Back In* (Cambridge: Cambridge University Press, 1985), pp. 169-91, both of which cover the war-related origins of the European nation-states.

¹⁰I cite examples of economic models exhibiting the nationalistic fallacy of composition below. One of the very few written challenges to the nationalistic model is Murray N. Rothbard, "War, Peace and the State," in Rothbard, *Egalitarianism as a Revolt Against Nature: And Other Essays* (Washington, D.C.: Libertarian Review Press, 1974) pp. 70-80. I have profited greatly from this pathbreaking essay.

United States government. All that is significant is whether transferring the capital city brings the citizens a net loss or gain. The danger is not foreign conquest per se, but the amount of power the conquering State can successfully wield.

In the final analysis, protection from foreign States is not a discrete or unique service. It is a subset of a more general service: protection from *any* State. Whether we formally label an oppressive State "foreign" or "domestic" becomes a secondary consideration. Although States differ enormously in the amount of domestic power they exercise, they all share certain characteristics. These shared characteristics are more than definitional, and as I hope to show, fatally undermine the public-goods justification for State-provided defense.

Admittedly, the distinction between the two services that go under the name "national defense" has not so far been grounded entirely in an empirical examination of people's subjective preferences. How can we as economists or historians question the prevailing nationalism, when people do in fact put a high value on the preservation and glorification of their own State? If the service that people desire is protection of the State per se, the State is undoubtedly the best institution for the job.

I do not question the efficacy of the State in providing its own protection. However, my impression is that most people view the State as a production good, a means to other ends, rather than as a pure consumption good, something they value in and of itself. The State does not directly enter their utility functions; instead, people want their government to be powerful relative to other governments basically because they believe that this helps to protect them from foreign States.

If my impression is correct, nationalism becomes something other than a mere subjective preference. It becomes a positive social theory, as legitimately subject to criticism for its policy recommendations as socialism. There is no refuting the socialist who favors central planning for its own sake; but most socialists favor central planning because of positive (and in my opinion, mistaken) theories about its consequences.¹¹

History tentatively reinforces the impression that nationalism rests upon a positive social theory. Prior to the French Revolution, European subjects did not identify strongly with their rulers. Wars

¹¹See Don Lavoie, *National Economic Planning: What is Left?* (Cambridge, Mass.: Ballinger, 1985), and *Rivalry and Central Planning: The Socialist Calculation Debate Reconsidered* (New York: Cambridge University Press, 1985).

were major inconveniences to be avoided if possible while they were going on, but the masses were largely indifferent if the outcome was a change of rulers. Indeed, soldiers and civilians would often enter the service of foreign rulers without being aware that they were doing anything unusual. The spread of modern nationalism coincided with the spread of the novel idea that governments should in some manner benefit their subjects.¹²

In any case, an examination of people's subjective preferences would reveal which service or mix of services people desire when they demand national defense.¹³ A definitive answer is hampered by national defense's tax funding, which prevents people from revealing their preferences directly and unambiguously. An examination of whether the State is a good institution for protecting people's lives, property, and liberty, assuming that is what they prefer, is equally legitimate. I am willing to accept the prospect that people may still worship the State, even after discovering that it gives them no real protection.

II

When Paul Samuelson first formalized public-goods theory, it was at a time when many economists unreflectively subscribed to what Harold Demsetz has called the nirvana approach to public theory. Demonstrating some "market failure" with respect to an abstract optimum was considered sufficient to justify State action. Economists assumed that the costless, all-knowing, and benevolent State could simply and easily correct any failure.

Since then, economists have become far more realistic. Public-goods theory has advanced to the point where it is now an exercise in

The approach in this article to the relationship between positive and normative economics is identical to the *wertfrei* approach of Ludwig von Mises, as expounded in *Theory and History: An Interpretation of Social and Economic Evolution* (New Haven, Conn.: Yale University Press, 1957), pp. 26-34, and *Human Action: A Treatise on Economics*, 3rd. rev. ed. (Chicago: Henry Regnery, 1966), pp. 881-85. See also Murray N. Rothbard, *Power and Market: Government and the Economy* (Menlo Park, Calif.: Institute for Humane Studies, 1970), pp. 189-96. A quite different formulation of basically the same approach is David Friedman, "Many, Few, One: Social Harmony and the Shrunk Choice Set," *American Economic Review* 70 (March 1980): 225-32.

¹²Historical generalizations of this sort are admittedly subject to many particular exceptions. Nonetheless, consult Hans Kohn, *The Idea of Nationalism: A Study in Its Origins and Backgrounds* (New York: Macmillan, 1944), pp. 16-17. For further details, see Andre Corvisier, *Armies and Societies in Europe, 1494-1789* (Bloomington: Indiana University Press, 1979); John Childs, *Armies and Warfare in Europe, 1648-1789* (New York: Holmes & Meier, 1982); and Geoffrey Best, *War and Society in Revolutionary Europe, 1770-1870* (New York: St. Martin's Press, 1982).

¹³For a purely formal approach to people's utility functions with regard to national defense, see Wagner, "National Defense as a Collective Good."

comparative institutions. Demonstrating "market failure" is no longer sufficient. One must compare the market with the State, not as one wishes the State would behave in some ideal realm, but as it must behave in the real world. To justify State action, one must show that the State has the capacity and the incentive to do a better job than the market can do. Can the State provide the public good without costs that exceed the benefits? And is there some incentive structure that would conceivably insure that it do so?¹⁴

Economists within the field of public choice have done some of the most important work on the comparative capabilities of the State—by applying public-goods insights to political action itself. They have come to the realization that the free-rider incentive does not only arise for market enterprises. As Mancur Olson has demonstrated, the free-rider incentive can arise for any group, especially political groups wanting to influence State policy. This imparts an inherent

¹⁴Demsetz makes the comparison between the "nirvana" and "comparative institutions" approaches in "Information and Efficiency: Another Viewpoint," *Journal of Law and Economics* 12 (April 1969): 1-3. Of the earliest assertions of the comparative-institutions approach, perhaps the most influential were Ronald Coase, "The Problem of Social Cost," *ibid.* 3 (October 1960): 1-44; James M. Buchanan, "Politics, Policy, and the Pigovian Margins," *Economica* 29 (February 1962): 17-28; and Ralph Turvey, "On the Divergences between Social Cost and Private Cost," *ibid.* 30 (August 1963): 309-13. I have already cited the first applications to public goods: Demsetz, "The Exchange and Enforcement of Property Rights"; Minasian, "Television Pricing and the Theory of Public Goods"; McKean and Minasian, "On Achieving Pareto Optimality—Regardless of Cost"; and David and Winston, "On the Distinction Between Public and Private Goods."

To be completely fair, Samuelson from his first article, "The Pure Theory of Public Expenditure," on did *technically* take a positive approach and never insisted that the public-goods "market failure" necessarily justified government intervention. But as Head, in "Public Goods: The Polar Case," reports: "It is clearly recognized by both Samuelson and Musgrave that political provision for public goods must pose difficult problems. There is, however, a clear implication that the market failure problem is such that the political mechanism could hardly prove inferior" (p. 7). Only in an intemperate reply to Minasian's "Television Pricing and the Theory of Public Goods," did Samuelson finally give some prominence to his admission that a public good did not always require State provision. See his "Public Goods and Subscription T.V.: Correction of the Record," *Journal of Law and Economics* 7 (October 1964): 81-83.

Of course, in order to determine whether the benefits of State provision of a public good outweigh the costs, one must be able to measure them. But all costs and benefits are ultimately subjective, and only fully revealed through the voluntary actions of individuals. Starting from this radical subjectivist stance, Karl T. Fielding, "Nonexcludability and Government Financing of Public Goods," *Journal of Libertarian Studies* 3 (Fall 1979): 293-38, and Barry P. Brownstein, "Pareto Optimality, External Benefits and Public Goods: A Subjectivist Approach," *ibid.* 4 (Winter 1980): 93-106, conclude that the State can never do better than the market in providing public goods, even if it wanted to. My argument manages to skirt this thorny theoretical issue by comparing the market and the State with respect to incentives, rather than with respect to costs and benefits. If the State has fewer real-world incentives to provide a public good than the market, the comparative costs and benefits become irrelevant.

public-goods character to all political decisions.¹⁵

Assume that one of us wishes to change some State policy that we personally find particularly onerous—for instance, repeal a tax. We are members of a fairly large group that will benefit if the tax is repealed. If enough of us contribute money, time, or other resources to bringing about the tax's repeal, we will succeed and all be better off. The money we save in taxes will more than reimburse us for our effort. Unfortunately, once the tax is repealed, even those who did not join our campaign will no longer have to pay it. We cannot exclude them from the benefits of the tax's repeal. They will be free riders on our political efforts.

Just as in the case of a non-excludable good in the market, every potential beneficiary of the tax repeal has an incentive, from the perspective of economic self-interest, to try to be a free rider. If enough of them act according to this incentive, the tax will never be repealed. We can call this result a "political failure," completely analogous to the "market failure" caused by non-excludability.

Of course, this example grossly oversimplifies the problem. Under a democratic State, people do not directly purchase changes in State policy; they vote for them. Or even more precisely, some of them can vote for representatives who then can vote on and bargain over State policy. If the tax repeal example was completely accurate, nearly every intentional benefit provided by the State would be a pure private good, similar to the current salaries of politicians and bureaucrats. With voting, political entrepreneurs and vote-maximizing firms (which are called political parties) have some incentive to provide us with our tax repeal, even if we do not politically organize, in order to entice us to vote for them.¹⁶

¹⁵The first public-choice work to begin to apply public-goods theory to political action was Anthony Downs, *An Economic Theory of Democracy* (New York: Harper and Row, 1957), which examined political parties as vote-maximizing firms. James M. Buchanan and Gordon Tullock, in *The Calculus of Consent: Logical Foundations of Constitutional Democracy* (Ann Arbor: University of Michigan Press, 1962), took a hard-headed look at the drawbacks of majority rule, although they coupled it up with an ethereal foray into the mystical realm of social contract. One of the most seminal contributions to this tradition, the first edition of which appeared in 1965, was Mancur Olson, *The Logic of Collective Action: Public Goods and the Theory of Groups*, 2nd ed. (Cambridge, Mass.: Harvard University Press, 1971). It applied public-goods theory to groups in general. William A. Niskanen, Jr., *Bureaucracy and Representative Government* (Chicago: Aldine-Atherton, 1971), introduced the notion of the bureaucracy as an independent special interest group. Further refinements upon how the democratic process benefits special interests include Gordon Tullock, *Toward a Mathematics of Politics* (Ann Arbor: University of Michigan Press, 1967), and Albert Breton, *The Economic Theory of Representative Government* (Chicago: Aldine, 1974).

¹⁶Richard E. Wagner, in a review of the first edition of Olson's *Logic of Collective Action*—"Pressure Groups and Political Entrepreneurs," *Papers on Non-Market Decision*

This incentive, however, is not very great. First of all, voting itself, unless compulsory, is a public good. An individual must expend time and other resources to vote, but he or she can avoid these expenditures by free riding on the voting of others. Only in the very remote case where the voter anticipates that a single vote will decide the election's outcome does this incentive to free ride disappear. Consequently, the political entrepreneur must have some reason to expect that we will vote at all. And if we do in fact vote, he must in addition have some reason to expect that the tax repeal, among all the other competing issues, will affect how we vote. Our forming a political organization to repeal the tax gives him reason to believe both these things.¹⁷

In short, unorganized groups have some influence upon the policies of a democratic State. But other things being equal, groups which organize and campaign for policies have a significant advantage. That is presumably why they organize and campaign. It strains credulity to suppose that all the people who pour vast sums of money into political lobbying are utterly mistaken in the belief that they thereby gain some leverage on policy. The common observation that special interests have inordinate influence upon a democratic State is without doubt empirically well founded.

Two variables affect the likelihood that a group will overcome the free-rider problem and successfully organize. These variables operate whether the group is trying to attain non-excludable benefits on the market or from the State. The first is the size of the group. The smaller the group, *ceteris paribus*, the more likely the members are to organize successfully. The larger the group, the more difficult it is to involve enough of them to secure the public good.

Making 1 (1966): 161-70—raises the political-entrepreneur thesis as an objection to Olson's conclusions. Norman Frohlich, Joe A. Oppenheimer, and Oran R. Young, *Political Leadership and Collective Goods* (Princeton: Princeton University Press, 1971), stress the role of the entrepreneur in creating political organizations. Olson responds briefly in the 2nd ed., pp. 174-75. Brian Barry, *Sociologists, Economists and Democracy* (Chicago: University of Chicago Press, 1978), pp. 37-40, and Russell Hardin, *Collective Action* (Baltimore, Md.: The Johns Hopkins University Press, 1982), pp. 35-37, go into the weakness of the political-entrepreneur thesis in greater detail.

¹⁷The fact that voting becomes less of a public good the closer the anticipated outcome of the election allows Yoram Barzel and Eugene Silberberg, "Is the Act of Voting Rational?" *Public Choice* 16 (Fall 1973): 51-58, to explain some of the variation in voter turnout. Nevertheless, voting remains the gaping hole in much of the public-choice literature. The fact that voting is a public good, and is not therefore "rational" according to public-choice assumptions, has been long realized. Yet, many public-choice theorists go on blithely spinning out elaborate models based on the untenable paradox that people always vote but in every other respect always behave "rationally." Downs, *An Economic Theory of Democracy*, recognizes the problem but does not resolve it. For an extended discussion of this paradox, see Barry, *Sociologists, Economists and Democracy*, pp. 13-19.

The second variable is the difference between the value of the public good to the members of the group and the cost to them. The greater this difference, *ceteris paribus*, the more likely they are to organize successfully. Indeed, if this difference is great enough, one single member might benefit enough to be willing to pay the entire cost and let all the other members of the group free ride. The smaller this difference, on the other hand, the more essential becomes the contribution of each potential member.¹⁸

In short, the democratic State makes it much easier to enact policies that funnel great benefits to small groups than to enact policies that shower small benefits on large groups. Because of this free-rider induced "political failure," the State has the same problem in providing non-excludable goods and services as the market—with one crucial difference. When a group successfully provides itself a public good through the market, the resources it expends pay directly for the good. In contrast, when a group successfully provides itself a public good through the State, the resources it expends only pay the overhead cost of influencing State policy. The State then finances the public good through taxation or some coercive substitute.

Moreover, the group that campaigned for the State-provided public good will *not* in all likelihood bear very much of the coerced cost of the good. Otherwise, they would have had no incentive to go through the State, because doing so then costs more in total than simply providing themselves the good voluntarily. Instead, the costs will be widely distributed among the poorly organized large group, who may not benefit at all from the public good.

This makes it possible for organized groups to get the State to provide bogus public goods, goods and services which in fact cost much more than the beneficiaries would be willing to pay even if exclusion were possible and they could not free ride. In this manner, the State generates externalities, and ones that are negative. Rather

¹⁸Olson's taxonomy of groups—privileged (small), intermediate, and latent (large)—in *The Logic of Collective Action* treats these two factors, group size and relative cost of the public good, simultaneously and thus slightly confuses the issue. Hardin, *Collective Action*, pp. 38-42, clarifies Olson's taxonomy, correctly pointing out that a privileged group (one in which a single member values the public good enough to pay its entire cost) could theoretically be quite large. One of the clearest expositions of these factors appears in David Friedman's neglected *The Machinery of Freedom*, pp. 185-88.

Admittedly, there is some ambiguity about which *ceteris paribus* when varying group size. Some scholars have consequently challenged the claim that larger groups have greater difficulty overcoming the free rider incentive. See for instance John Chamberlin, "Provision of Public Goods as a Function of Group Size," *American Political Science Review* 68 (June 1974): 707-16. Again, the best resolution of these questions is Hardin, *Collective Action*, pp. 42-49 and 125-37.

than overcoming the free-rider problem, the State benefits free loaders, who receive bogus public goods at the expense of the taxpayers. Provision of these goods and services moves the economy away from, not toward, Pareto optimality. When the bogusness of such public goods is obvious enough, economists call them transfers.¹⁹

What is the upshot of this "political failure" for national defense? In the case of defending the State itself, we are dealing quite clearly with a service that the State has enormous incentives to provide. If this is a non-excludable good or service at all, then it is a public good that benefits small groups very highly. But in the case of defending the people, we are talking about, in the words of David Friedman, "a

¹⁹The position that democratic political action, rather than producing genuine public goods, *primarily if not exclusively* produces bogus public goods that benefit special interests, goes back as far as Giovanni Montemartini's turn-of-the-century essay, "The Fundamental Principles of a Pure Theory of Public Finance," translated and reprinted in Musgrave and Peacock, *Classics in the Theory of Public Finance*, pp. 137-51. One of the most succinct and lucid modern restatements of the position is, again, Friedman, *The Machinery of Freedom*, pp. 213-15, who concludes that "bad law is often less of a public 'good' than good law." Brubaker, "Free Ride, Free Revelation, or Golden Rule," uses the term "forced riding" to describe what the State does in the name of providing public goods. A detailed presentation of the position is Joseph P. Kalt, "Public Goods and the Theory of Government," *Cato Journal* 1 (Fall 1981): 565-84.

Gordon Tullock has suggested the potential scope of this "political failure," apparently without fully intending or realizing it, in an intriguing examination of the perfectly corrupt State—a State where *all* changes in policy are directly purchased. His "Corruption and Anarchy," in Tullock, ed., *Further Explorations in the Theory of Anarchy* (Blacksburg, Va.: Center for the Study of Public Choice, 1974), pp. 65-70, concludes that a perfectly corrupt State would generate policies identical to those that would be generated without the State at all. In other words, public goods are no more likely to be produced with the perfectly corrupt State than without it.

Of course, the analysis does not always lead scholars to this extreme position. Tullock himself, in an early article that precociously pre-dated most of the public choice literature, "Some Problems of Majority Voting," *Journal of Political Economy* 67 (December 1959): 571-79, reached the more moderate conclusion, which he still apparently holds, that the democratic process merely generates a government budget that is too large. Indeed, Anthony Downs, "Why the Government Budget is Too Small in a Democracy," *World Politics* 12 (July 1960): 541-63, turns the analysis around. By focusing on all the genuine public goods that the democratic process has no incentive to produce, he reaches the bizarre conclusion that the democratic State will inevitably be too small.

Incidentally, the inherent public-goods nature of political action fatally undercuts the latest abstraction in public-goods theory: the demand-revealing process. As advanced by Edward H. Clarke, *Demand Revelation and the Provision of Public Goods* (Cambridge, Mass.: Ballinger, 1980), and Jerry Greene and J. J. Laffont, *Incentives in Public Decision-Making* (North Holland, The Netherlands: 1979), as well as in numerous journal articles, the demand-revealing process is a proposed voting scheme that links tax payments to votes in such a way as to give people an incentive (1) to vote in the first place and (2) to reveal their true demand-preferences for (or against) various public goods with their votes. Ignoring whether this scheme would work if implemented, we can clearly see that implementing it at all runs afoul of the public-goods obstacle. Without the demand-revealing process in effect already, voters have absolutely no incentive to vote for putting the process into effect.

public good ... with a very large public." The benefits, although potentially great, are dispersed very broadly.²⁰

Thus, to the extent that the free-rider obstacle inhibits market protection of liberty, it raises an even more difficult obstacle to the State over undertaking that vital service. The State has strong incentives to provide national defense that protects itself and its prerogatives, but it has very weak incentives to provide national defense that protects its subjects' lives, property, and liberty. We can now theoretically understand the common historical divergence between defending the State and defending the people.

Furthermore, there is a perverse inverse relationship between the people's belief that the State defends them and the reality. To the extent that they accept this nationalistic conclusion, their political resistance against the domestic State's aggression, however weak because of the existing public-goods problem, decreases further. This is most noticeable during periods of actual warfare. The belief reduces the amount of protection they enjoy, at least against the domestic State.

Nationalism thus results in an ironic and circular paradox. It views the State as a protection agency, but this very view contributes to the State's literal role as a protection racket. Those who decline to pay for the State's protection become the State's victims. This in turn gives the State an incentive to find or create foreign enemies, even when none really exist. For without a foreign threat, the justification for the State's protection becomes far less persuasive.²¹

My remarks have thus far been confined to the democratic State. They apply, however, even more strikingly to the undemocratic State, insofar as there is any significant difference between the political dynamics of the two types. For reasons that I will explain in the next section, I actually believe that many economists have over-emphasized

²⁰Friedman, *The Machinery of Freedom*, p. 189. Dwight R. Lee, "The Soviet Economy and the Arms Control Delusion," *Journal of Contemporary Studies* 8 (Winter/Spring 1985): 46, makes the same observation about the political production of national defense, but because he does not recognize the distinction between defending the State and defending the people, he arrives at a much different conclusion: viz., democratic States will under-produce military defense relative to undemocratic States.

²¹A similar point is made by Kenneth E. Boulding, "The World War Industry as an Economic Problem," in the collection he co-edited with Emile Benoit, *Disarmament and the Economy* (New York: Harper and Row, 1963), pp. 3-27. He refers to the world's competing military organizations as "milorgs" and insists that, in contrast to any other social enterprise (including police protection), military organizations generate their own demand. "The only justification for the existence of a milorg is the existence of another milorg in some other place. ... A police force is not justified by the existence of a police force in another town, that is, by another institution of the same kind" (p. 10).

the operative significance of formal voting. Both types of States are subject to the influence of groups that marshal resources in order to affect policy. Formal voting merely makes it possible for some changes to manifest themselves faster and less painfully.

But let us for a moment accept the simplistic model of the undemocratic State. Assume that the State's policies are determined primarily by the whim of a single despot. If he is a benevolent despot, then the defense of his subjects might be high on his agenda. If he is a despot who inhabits the real world, he will be exclusively interested in defending his State and its territorial integrity.

My argument still does not completely rule out the possibility that the State might actually defend its subjects. Whereas the difference between the political dynamics of democratic and undemocratic States is overdrawn, States do differ markedly in the amount of aggression they commit against their own subjects. If we automatically assume that a conquering State can wield as much or more power over foreign populations as it does over its domestic subjects, then a relatively less oppressive State will, in the process of defending itself, provide some protection for its subjects. But this is at best an unintended positive externality.

III

To this point, our conclusions have been somewhat pessimistic, justifying Earl Brubaker's observation that the free-rider assumption *makes* economics a dismal science.²² Based on that assumption, neither the market nor the State has much incentive to provide any direct protection of peoples' lives, property, and liberty. To the extent that historical accident has resulted in marked differences in the power of various States over their own subjects, some such protection might be produced as an unintended externality of the State's effort to protect its own territorial integrity. But that very effort at self-protection will also have a significant countervailing negative impact on the degree to which the State aggresses against its own subjects.

Attributing a difference to historical accident, however, is simply another way of saying that the difference is unexplained. Not until we explain the marked differences in domestic power of the world's States will we fully comprehend the relationship between protecting the State and protecting the people.

One naive explanation common among economists is the public-goods theory of the State. This theory rests upon a sharp dichotomy between two types of States, usually democratic and undemocratic.

²²Brubaker, "Free Ride, Free Revelation, or Golden Rule," p. 153.

Undemocratic States according to this theory are little better than criminal gangs, run by single despots or small groups of oligarchs for essentially their own personal ends. The subjects of these States suffer under their rulers but can do very little about their plight. Any effort on their part to change the situation, whether through violent revolution or other means, is a public good, caught in the free-rider trap.²³

Democratic States, in contrast, are the result of social contracts. According to the public-goods theory of the State, people create democratic States to solve the free-rider problem. At some obscure time in the past, they drew up constitutional rules in which they agreed to be coerced in order to provide public goods for themselves. Over time, because the free-rider problem generates "political failure," democratic States have a tendency to fall under the influence of special interests. Perhaps better constitutional decision rules could alleviate this decay. Nonetheless, democratic States always retain vestiges of their public-goods origin. That is why they aggress against their own subjects far less than do undemocratic States.²⁴

We do not have to turn to the readily accessible historical evidence to refute this naive theory about the origin of democratic States. The theory's proponents quite often do not literally believe it. Instead,

²³For the argument that revolution is a public good, see Gordon Tullock, "The Paradox of Revolution," *Public Choice* 9 (Fall 1971): 89-99, which became with minor alterations one of the chapters of his book, *The Social Dilemma: The Economics of War and Revolution* (Blacksburg, Va.: University Publications, 1974). Tullock distinguishes between what he calls "exploitative" and "cooperative" governments, rather than democratic and undemocratic, but the two classifications are operationally almost identical.

²⁴The public-goods theory of the democratic State is still stated best in Baumol, *Welfare Economics and the Theory of the State*: "The essence of democratic government may then be the voluntary acceptance of a central agency of intimidation designed for the attainment of the desires of the public" (p. 57). Baumol traces this view of the State back through John Stuart Mill, Adam Smith, and David Hume. This view also informs the constitutional speculations about better decision rules of Buchanan and Tullock in *The Calculus of Consent*. Buchanan is more pessimistic about the State in "Before Public Choice," from Gordon Tullock, ed., *Explorations in the Theory of Anarchy* (Blacksburg, Va.: Center for the Study of Public Choice, 1972), pp. 27-37, and in *The Limits of Liberty: Between Anarchy and Leviathan* (Chicago: University of Chicago Press, 1975), but he is still caught up in the milieu of the social contract. Even Olson, *The Logic of Collective Action*, pp. 98-110, who uses the free-rider problem to critique effectively the Marxist theory of the State, still appears uncritically to accept the public-goods theory of the State. One public-choice theorist who is shying away from social contract and moving toward a generalized exploitation theory of the State is J. Patrick Gunning, "Towards a Theory of the Evolution of Government," in Tullock, ed., *Explorations in the Theory of Anarchy*, pp. 19-26. Douglass C. North, *Structure and Change in Economic History* (New York: W. W. Norton, 1981), pp. 20-32, makes a less-than-convincing effort to reconcile the contract and exploitation theories of the State by claiming that a purely predatory State will still provide many important genuine public goods in order to maximize its revenue.

they view the theory as merely explaining the conceptual nature rather than the concrete origin of the democratic State. Either way, however, the theory has an inner contradiction. Creating a democratic State of this nature is a public good itself. A very large group must in some manner have produced it. Because of the free-rider problem, they have no more incentive to do that than to revolt against an undemocratic State or to provide themselves any other non-excludable benefit.²⁵

A more realistic alternative to the public-goods theory of the State is what we can call the social-consensus theory of the State. All States are legitimized monopolies on coercion. The crucial word is "legitimized." This legitimization is what differentiates States from mere criminal gangs. Any society in which people refrain from regularly killing each other enjoys some kind of social consensus. No government rules through brute force alone, no matter how undemocratic. Enough of its subjects must accept it as necessary or desirable for its rule to be widely enforced and observed. But the very consensus which legitimizes the State also binds it.²⁶

²⁵ Kalt, "Public Goods and the Theory of Government," pinpoints the contradiction in the public-goods theory of the State. The still devastating, classic, point-by-point refutation of the social contract, in its literal rather than metaphorical version, remains Lysander Spooner, *No Treason: The Constitution of No Authority* (1870; reprinted, Larkspur, Colo.: Pine Tree Press, 1966). See also Williamson M. Evers, "Social Contract," *Journal of Libertarian Studies* 1 (Summer 1977): 185-94, which traces the literal notion of a social contract all the way back to Socrates.

²⁶ Since the definition of the State (or government) is something political scientists cannot even agree upon, mine will obviously be controversial. By "legitimized" (a positive adjective), I of course do not mean "legitimate" (a normative adjective). Most economists should have no difficulty conceiving of the State as a monopolistic coercive institution, but non-economists might balk. Members of the general public appear to have a bifurcated definition of the State, depending on whether it is domestic or foreign. They view hostile foreign States as simply monopolies on coercion, just like criminal gangs, which is why they fear foreign conquest. They overlook the legitimization of these States. On the other hand, that is the only element they seem to recognize about the domestic State, overlooking or at least deemphasizing the coercive element. This dichotomy is only a cruder version of the distinction made by public-goods theory between democratic and undemocratic States. For an extended defense of the implications of this universal definition, see Murray Rothbard, "The Anatomy of the State," in *Egalitarianism as a Revolt Against Nature*, pp. 34-53. I should note that my definition neither necessarily implies nor necessarily contradicts the conquest theory of the State's origin, as expounded most notably in Franz Oppenheimer, *The State* (1914; reprinted, New York: Free Life Editions, 1975).

Although I put the term "legitimization" into my definition of the State, I am not making a purely tautological claim. Not all coercive institutions are called States, and I think the term "legitimization" captures the difference. But if someone should empirically demonstrate that the Soviet State, for instance, is not considered legitimate by a major number of its subjects, then I would modify my definition, rather than deny that the organization ruling over the Russians was a State.

The social consensus bears little resemblance to the mythical social contract of public-goods theory. Whereas the social contract is generally conceived of as an *intentional* political agreement, agreed upon explicitly at some specific moment, the social consensus is an *unintended* societal institution, like language, evolving implicitly over time. Sometimes, the evolution of the social consensus can be very violent. Often, particular individuals or even fairly large groups will strongly disagree with certain features of their society's consensus. But at all times, members of society are socialized into the consensus in ways that they only dimly grasp, if at all.²⁷

Consider a classroom of average American citizens. Ask for a show of hands on the following question: How many would pay their taxes in full if no penalties resulted from non-payment? Very few would raise their hands; probably only some masochists, ardent statist, and individuals who were not entirely honest. This shows that taxation is involuntary. Then ask the group a second question: How many think taxes are necessary or just? This time, nearly every hand would go up, except those of a few radical libertarians. This shows that taxation is legitimized.²⁸

Of course, one of the reasons Americans generally view taxation as legitimate is because they think it is necessary in order to provide public goods. All this proves, however, is that, although the public-goods theory of the State is utterly worthless as an objective description of the State's origin or nature, it is very valuable as an ideological rationalization for the State's legitimization. It performs a function analogous to that performed by the divine right of kings under monarchical States or by Marxist dogma under communist States.

For unlike the public-goods theory of the State, the social-consensus

²⁷ One of the earliest observations that a social consensus *always* legitimizes the State is Etienne de la Boetie, *The Politics of Obedience: The Discourse of Voluntary Servitude* (1574; reprinted, New York: Free Life Editions, 1975). La Boetie first wrote this essay in sixteenth-century France, while living under a despotic monarch. In other words, the concept of legitimized State, rather than being unique to democratic States, arose at a time when there were no such States to study.

Many other writers have since accepted the social-consensus theory of the State. For instance, see David Hume, "Of the First Principles of Government," in *Essays, Moral, Political, and Literary* (1741-42; reprint, London: Oxford University Press, 1963), pp. 29-34. Ludwig von Mises discusses the role of ideas in social consensus in *Human Action*, pp. 177-90. The description of the social consensus as an unintended institution that evolves implicitly rather than an intended construct that is agreed upon explicitly derives from Friedrich A. Hayek. The implications of social consensus for various kinds of political action are exhaustively explored in Gene Sharp, *The Politics of Nonviolent Action* (Boston: Porter Sargent, 1973), esp. pt. 1, "Power and Struggle," although Sharp has a tendency to confound *legitimization* with mere *compliance* to the State's rule.

²⁸ I am confident about the empirical results, having conducted the test many times.

theory applies universally to all States. It predicts that if you conducted the same survey about taxation upon a group of average Russians living within the Soviet Union, or a group of average Iranians living under the Ayatollah (and you could guarantee them complete immunity regardless of how they answered), you would get similar results. These foreign and "evil" undemocratic States are not exogenous and alien institutions imposed on their subjects by sheer terror. They are complex products of the culture, attitudes, preferences, and ideas, whether explicit or implicit, that prevail within their societies.²⁹

The vast ideological and cultural differences among the peoples of the world are what explain the marked differences in the domestic power of their States. The consensual constraints upon States differ in content, but all States face them. The Soviet leaders fully realize this, which is why they devote so many resources to domestic and foreign propaganda. The shifting social consensus also explains the many changes in the form and the power of the State over time. Although professional economists tend to ignore the ideological and cultural components of social dynamics, professional historians give these factors the bulk of their attention.

In the not-so-distant past, the world was entirely in the grip of undemocratic States, which permitted their subjects very little liberty. Democratic States evolved historically from undemocratic States. States that now must tolerate a large degree of liberty emerged from States that did not have to do so. Public-goods theory is in the awkward position of theoretically denying that this could have happened. It raises an across-the-board theoretical obstacle to

²⁹ Although Americans like to think that the Russian people share the aspirations of the widely publicized Russian dissidents, most observers report that the Russians view their dissidents much the same way as Americans view their traitors. Moreover, rather than desire more liberty, there is a considerable segment of the Soviet population that thinks the Soviet State is too soft. Despite official disapproval, this growing Stalin cult longs for the good old days of effective Stalinist discipline. Victor Zaslavsky, *The Neo-Stalinist State* (New York: Oxford University Press, 1983), has actually conducted fairly reliable surveys among Soviet subjects, which indicate quite unambiguously that the Soviet State is legitimized. For a look at some of the conflicting ideological trends within the Soviet Union, see Alexander Yanov, *The Russian New Right: Right-Wing Ideologies in the Contemporary USSR* (Berkeley, Calif.: Institute for International Studies, 1978). Good single-volume histories that impart an appreciation for the domestic sources of the Soviet State are Robert V. Daniels, *Russia: The Roots of Confrontation* (Cambridge, Mass.: Harvard University Press, 1985), and Geoffrey Hosking, *The First Socialist Society: A History of the Soviet Union from Within* (Cambridge, Mass.: Harvard University Press, 1985). An introduction to the various interpretations of Soviet history by American scholars, written from a revisionist slant, is Stephen F. Cohen, *Rethinking the Soviet Experience: Politics and History since 1917* (New York: Oxford University Press, 1985).

every conceivable reduction in State power that benefits more than a small group of individuals.³⁰ The social-consensus theory, in contrast, attributes this slow progress, sometimes punctuated with violent revolutions and wars, to ideological changes within the social consensus.

Thus, history is littered with drastic changes in State power and policy that resulted from successful ideological surmounting of the free-rider obstacle. The Minutemen volunteers who fought at Concord Bridge could not even come close to charging all the beneficiaries of their action. They produced tremendous externalities from which Americans are still benefiting today. The abolitionist movement produced such a cascade of positive externalities that chattel slavery—a labor system that was one of the world's mainstays no less than two hundred years ago, and had been so for millennia—has been rooted out everywhere across the entire globe. I could multiply the examples endlessly.³¹

Indeed, the existence of any voluntary ethical behavior at all faces a free-rider obstacle. Society is much more prosperous if we all cease to steal and cheat, but the single individual is better off still if everyone else behaves ethically while he or she steals and cheats whenever able to get away with it. Thus, everyone has a powerful personal incentive to free ride on other people's ethical behavior. If we all succumbed to that incentive, society would be very unpleasant.

³⁰This awkward position is clearest in Tullock's *Social Dilemma*. He concedes "that the earliest governments of which we have any positive knowledge were despotisms of one sort or another, and that despotisms have remained the dominant form of government of the human race ever since" (p. 25). But rather than notice that this creates considerable tension for his claim later in the book that revolutions bringing about social benefits are impossible, because of the free-rider obstacle, he instead makes the breathtaking assertion: "Revolution is the subject of an elaborate and voluminous literature and, if I am right, almost all of this literature is wrong" (p. 46). Actually, this statement represents a mellowing from the claim in his previous article, "The Paradox of Revolution." There he left out the qualifying word "almost" in front of "all of this literature."

³¹Revolutionary historians of the imperial school might deny that the stand at Concord Bridge generated any positive externalities, and they would point to the amount of freedom that the British people themselves came to enjoy. But these historians would just underestimate the externalities. The American Revolution not only brought net benefits for Americans, but by altering the nature of the British Empire, eventually brought benefits to the British as well. The premier work on the role of ideas in the American Revolution is Bernard Bailyn, *Ideological Origins of the American Revolution* (Cambridge, Mass.: Harvard University Press, 1967), while a work that explores the international repercussions of the revolution is Robert R. Palmer, *The Age of Democratic Revolution: A Political History of Europe and America, 1760-1899*, vol. 2 (Princeton: Princeton University Press, 1959-64). As for my other example, a magisterial survey of the international history of chattel slavery is David Brion Davis, *Slavery and Human Progress* (New York: Oxford University Press, 1984), while a narrower historical survey of the international abolitionist movement itself is his *The Problem of Slavery in Western Culture* (Ithaca, N.Y.: Cornell University Press, 1966).

We must avoid the mistaken impression that the State's police forces and courts are what prevents most stealing and cheating. To begin with, the initial creation of such a police and court system (at least under government auspices) is another public good. But far more important, the police and courts are only capable of handling the recalcitrant minority who refuse voluntarily to obey society's norms. A cursory glance at varying crime rates, over time and across locations, clearly indicates that the total stealing and cheating in society is far from solely a function of the resources devoted to the police and the courts. Certain neighborhoods are less safe, making an equal unit of police protection less effective, because they contain more aspiring ethical free riders. If all members of society or even a substantial fraction became ethical free riders, always stealing and cheating whenever they thought they could get away with it, the police and court system would collapse under the load.³²

In short, every humanitarian crusade, every broad-based ideological movement, every widely practiced ethical system, religious and non-religious, is a defiant challenge hurled at the public-goods argument. The steady advance of the human race over the centuries becomes a succession of successful surmounting of the free-rider obstacle. Civilization itself would be totally impossible unless people had somehow solved the public-goods problem, *voluntarily*.³³

³² Among the economists that recognize the public-goods nature of ethical behavior are James M. Buchanan, in "Ethical Rules, Expected Values, and Large Numbers," *Ethics* 76 (October 1965): 1-13; Richard B. McKenzie, in "The Economic Dimensions of Ethical Behavior," *Ethics* 87 (April 1977): 208-21, and North, in *Structure and Change in Economic History*, pp. 11-12, 18-19, 45-46. Buchanan again touches upon this aspect of ethical behavior in "Before Public Choice," pp. 29-30, where he emphasizes that ethical behavior involves a total externality—because an individual gains no benefits from his own ethical behavior—and in *The Limits of Liberty*, pp. 123-29, where he looks upon an increase in ethical free riding as an erosion of a society's rule-abiding capital.

³³ Rothbard, "The Myth of Neutral Taxation," makes a similar observation: "Thus the free-rider argument proves far too much. After all, civilization itself is a process of all of us 'free-riding' on the achievements of others. We all free-ride, every day, on the achievements of Edison, Beethoven, or Vermeer" (p. 545).

For a contrasting and ingenious attempt to interpret history as the working out of public-goods theory, rather than as the contradiction of it, see Mancur Olson, *The Rise and Decline of Nations: Economic Growth, Stagflation, and Social Rigidities* (New Haven, Conn.: Yale University Press, 1982). Although this effort is pioneering as far as it goes, it still depends at critical junctures upon historical accidents—wars, revolutions, and conquests—to sweep away the existing distributional coalitions. An even less satisfactory, although still very valuable efforts by economists to account for historical change without reference to people's ideological preferences but purely on the basis of material factors is Douglass C. North and Robert Paul Thomas, *The Rise of the Western World: A New Economic History* (New York: Cambridge University Press, 1973).

At least one of those two authors has begun to back away from this a-ideological stance, i.e., North, *Structure and Change in Economic History*. He states: "Casual

IV

Obviously, there is some flaw in public-goods theory. Howard Margolis points out that "no society we know could function" if all its members actually behaved as the free-rider assumption predicts they will. He calls this theoretical failure free-rider "overkill."³⁴

Despite this flaw, public-goods theory explains a great deal, which is why it remains so popular among economists. It explains why so many eligible voters do not waste their time going to the polls. But it fails to explain why so many of them still do go. (I think an interesting empirical study would be to determine what percentage of economists, who accept public-goods theory, violate their theoretical assumptions about human behavior by voting.) It explains why the progress of civilization has been so painfully slow. But it fails to explain why we observe any progress at all.

Before working out the implications of this theoretical flaw for national defense, let me digress briefly and try to identify it. It must involve some weakness in the theory's assumption about human behavior. I make no pretensions, however, about being able fully to resolve the weakness. Because this very issue sits at the conjunction of public-goods theory and game theory, it has become one of the most fertile areas of inquiry within economics and political science over the last decade. All I do is modestly offer some tentative thoughts about the sources of the weakness.

Two possibilities suggest themselves. Either people do not consistently pursue the ends that the free-rider assumption predicts they will pursue; or they pursue those ends but using means inconsistent with the assumption. I will take up both of these possibilities in order

1. *Do people consistently pursue their self-interest, as the free-rider assumption defines self-interest?* Public-goods theorists have offered not one, but two motives that should cause a person to behave in accordance with the free-rider assumption. The obvious is narrow economic self-interest. This end does provide a sufficient reason to free ride, but visualizing someone choosing a different end is quite easy. Simple altruism is not the only alternative that will violate this

everyday observation confirms the ubiquitous existence of the free rider behavior. But casual observation also confirms the immense number of cases where large group action does occur and is a fundamental force for change—action which, however, is simply inexplicable in neoclassical terms. The economic historian who has constructed his model in neoclassical terms has built into it a fundamental contradiction since there is no way for the neoclassical model to account for a good deal of the change we observe in history" (pp. 10-11).

³⁴Howard Margolis, *Selfishness, Altruism, and Rationality: A Theory of Social Choice* (Cambridge, Mass.: Cambridge University Press, 1982), p. 6.

narrow assumption. People may desire social improvements—liberty, justice, peace, etc.—not simply for their material benefits, but as ends in and of themselves, independently present within their utility functions. Patrick Henry may have been engaging in political hyperbole when he exclaimed “Give me liberty or give me death!”, but he was still expressing a willingness to pay more for attaining liberty than its economic returns would cover. Perhaps this willingness should be called ideological altruism; no matter what we call it, it appears to be quite common in human history.³⁵

Mancur Olson is the most prominent public-goods theorist to argue that a second motive beyond narrow economic self-interest justifies the free-rider assumption. And this second motive applies even to the individual with altruistic ends—if the group is large

³⁵ Several scholars, noting the empirical problem with the free-rider assumption, are moving in this direction. For instance, Robyn M. Dawes, “Social Dilemmas,” *Annual Review of Psychology* 31 (1980): 169-93, suggests that altruism, conscience, and social norms are important individual ends. Barry, *Sociologists, Economists, and Democracy*, goes so far as to propose that a full understanding of human society requires two distinct approaches: the economic and sociological. He is building upon Mancur Olson, “Economics, Sociology, and the Best of All Possible Worlds,” *Public Interest* 12 (Summer 1968): 96-118, who contrasts economics, the study of rational action, with sociology, the study of socialization. Higgs, *Crisis and Leviathan*, chap. 3, discusses ideology at great length as the factor which overcomes what he calls “Olson’s Iron Law of Collective Inaction.” Similarly, North gives chap. 5 of *Structure and Change in Economic History* the title “Ideology and the Free Rider Problem.”

But the most impressive work along these lines is Margolis’s *Selfishness, Altruism, and Rationality*, which is summarized in his journal article, “A New Model of Rational Choice,” *Ethics* 91 (January 1981): 265-79. Margolis steps beyond merely noting the ideological and altruistic components in people’s goals; he sets up a very intriguing formal model of human behavior that incorporates group-oriented goals and attempts to test it. His is the first serious attempt to determine when people will choose to free ride and when they will not. My only reservation is with his desire to use his model to resurrect the discredited notion of a bifurcated man: i.e., one whose selfish behavior predominates within the private realm, while his altruistic behavior predominates within the political realm. We observe a close to equal mixture of both motives within both realms.

Daniel Klein, “Private Turnpike Companies of Early America” (unpubl. ms., New York University) examines a historical instance in which what he calls “moral suasion” played a significant role in the provision of a good—roads—that is among the most frequently mentioned examples of a public good. Most of the investors in private turnpike companies in early America lost money, yet they continued to make this investment. Klein persuasively argues that it was not poor forecasting on their part that caused this behavior. They knowingly violated their narrow self-interest in order to provide the community with a public good.

I should note that I attach the adjective “narrow” to the term “self-interest” to indicate the usage that involves seeking particular, usually selfish, goals. This is to distinguish it from the broader usage of the term, which can encompass any goal, including altruism. Whether individuals do in fact pursue their narrow self-interest is a question subject to empirical verification or falsification, but individuals by definition always pursue their broad self-interest.

enough. He contends that only rationality in the pursuit of whatever end the individual chooses is strictly necessary. The individual will still choose to free ride, because for a public good requiring a large group his meager contribution will have no perceptible effect on attaining the end.³⁶

I could object that an individual's contribution to a cause is often not contingent in any way upon the cause's overall success. Consequently, how much the individual thinks his action will affect the probability of success is often irrelevant. Some people refuse to litter for instance, fully aware that their refusal will have no perceptible impact on the quantity of litter. Such individuals gain righteous satisfaction from doing what they believe is proper, regardless of its macro-impact. In addition to a sense of righteousness, ideological movements can offer their participants a sense of solidarity, of companionship in a cause, that keeps many loyal no matter how hopeless the cause.³⁷

But this objection concedes far too much to Olson. As philosopher Richard Tuck has cogently pointed out, Olson's notion of "rationality" if consistently obeyed precludes some everyday activities. It does not just apply to an individual's contribution to the effort of a large group; it applies just as forcefully to the cumulative actions of a single person on a large individual project. Olson's "rationality" is simply a modern variant of the ancient philosophical paradox of the Sorites. In one version, the paradox argues that there can never be a heap of stones. One stone does not constitute a heap, nor does the addition of one stone to something that is not already a heap. Therefore, no matter how many stones are added, they will never constitute a heap. (Interestingly enough, in the other direction, this paradox argues that there can never be anything but a heap of stones.)

One more word will not make a perceptible difference in the length of this paper. Because one word makes no difference, I would not have started in the first place if I had adhered to Olson's "rationality." One more dollar will not make a perceptible difference in a person's life savings. One day's exercise will not make a perceptible difference in a person's health. If the fact that the individual's imperceptible contribution goes toward a group rather than an individual effort is what is decisive, then we are simply back again at the motive of narrow self-interest. No doubt, this type of "rationality" does influence some people not to undertake some actions under some circumstances

³⁶Olson, *The Logic of Collective Action*, pp. 64-65.

³⁷Higgs, *Crisis and Leviathan*, chap. 3, heavily emphasizes the role of ideological solidarity.

But just how compelling people find it is demonstrated by the millions who vote in presidential elections, despite the near certainty that the outcome will never be decided by one person's vote.³⁸

2. *Do people pursue their self-interest but in a manner inconsistent with the free-rider assumption?* Olson, again, has suggested one way that individuals might effectively organize despite the free-rider obstacle. Groups can link their efforts at achieving non-excludable benefits with excludable by-products. Such by-products include low group-rate insurance and professional journals. The incentive provided by these by-products helps counteract the incentive to be a free rider.³⁹

The most intriguing aspect of the by-product theory is the easy method it offers for providing national defense without a State. The purchase of national defense could be linked to some excludable by-product that everyone wants, such as protection insurance or contract enforcement. Indeed, most of those advocating voluntary funding of national defense have hit upon some such related scheme.⁴⁰

Unfortunately, this solution is too easy. If the excludable by-product

³⁸Richard Tuck, "Is There a Free-Rider Problem, and if so, What is It?" in Ross Harrison, ed., *Rational Action* (Cambridge, Mass.: Cambridge University Press, 1979), pp. 147-56.

We can salvage Olsonian "rationality" under two strict conditions. When (1) a threshold level of resources is necessary before any of the public good becomes available whatsoever, and (2) people end up paying whatever resources they contribute, irrespective of whether they reach the threshold or not, it becomes rational not to contribute if a person predicts that the threshold will not be reached. In that special case, he or she would simply be throwing away resources for nothing. Notice that these two conditions apply more frequently to obtaining public goods through politics—which is often a win or lose, all or nothing, situation—than to obtaining public goods on the market. In particular, it applies to voting. Hardin, *Collective Action*, pp. 55-61, analyzes the first of these conditions, for which he employs the term "step goods."

About a decade ago, a popular book, Harry Browne's *How I Found Freedom in an Infree World* (New York: Macmillan, 1973), attempted to convince people that among other things they should not try to change society through political action. Browne gave basically two arguments: (1) there are much better ways for people to attain directly the benefits they want (narrow self-interest), and (2) their participation in political action does not change society anyway (Olsonian "rationality"). His book was a best seller, but the fact that he had to write it at all indicates how infrequently these two motives fully govern people's actions.

³⁹Olson, *The Logic of Collective Action*, pp. 132-68. Olson also refers to excludable by-products as "selective incentives." Gary Becker, "A Theory of Competition among Pressure Groups for Political Influence," *Quarterly Journal of Economics* 98 (August 1983): 372-80, basically depends on the by-product theory to overcome the free-rider incentive against political activity. Looked at another way, the by-product theory converts a full public good into a positive externality of a private good.

⁴⁰Those advocating voluntary funding of national defense through the sale of excludable by-products include Ayn Rand, "Government Financing in a Free Society," in *The Virtue of Selfishness: A New Concept of Egoism* (New York: New American Library, 1964), pp. 157-63; Jarret B. Wollstein, *Society Without Coercion: A New Concept of Social Organization* (Silver Springs, Md.: Society for Individual Liberty, 1969), pp. 35-38; Morris

uct is really what people want, then a competitor who does not link it with the non-excludable good or service can sell it at a lower price. Only if the group has a legal monopoly on marketing its by-product can it really counteract the free-rider incentive. Every really successful example of groups relying upon by-products that Olson discusses involve some sort of legal monopoly. But the groups' initial attainment of this legal monopoly remains an unexplained surmounting of the public-goods problem.⁴¹

Far more promising than the by-product theory for explaining the empirical weakness of the free-rider assumption is some of the recent dynamic analysis being done in game theory. As many scholars have pointed out, the free-rider problem in public-goods theory is identical to the famous Prisoner's Dilemma in game theory.⁴²

The Prisoner's Dilemma derives its name from an archetypal situation where two prisoners are being held for some crime. The prosecutor separately proposes the same deal to both prisoners because he only has sufficient evidence to convict them of a minor crime with a light sentence. Each is told that if he confesses, but the other does not, he will get off free, while the other will suffer the full penalty, unless the other also confesses. If they both confess, the both will be convicted of the more serious crime, although they both will receive some small leniency for confessing. This deal gives each prisoner an incentive independently to confess, because by doing so he individually will be better off regardless of what the other does

and Linda Tannehill, *The Market for Liberty* (Lansing, Mich.: Tannehill, 1970), pp. 126-35; and Tibor R. Machan, "Dissolving the Problem of Public Goods," in Machan, ed. *The Libertarian Reader* (Totowa, N.J.: Rowman and Littlefield, 1982), pp. 201-08. Ran and Machan would still have national defense provided by the State, but one that collects no taxes. Wollstein and the Tannehills—whose separate works were reprinted together under the combined title *Society without Government* (New York: Arno Press, 1972)—prefer private alternatives. For a telling critique of the by-product theory as applied to national defense, see Friedman, *The Machinery of Freedom*, pp. 192-93.

⁴¹ Hardin, *Collective Action*, pp. 31-34, criticizes the by-product theory.

⁴² The book which launched mathematical game theory was John von Neumann and Oskar Morgenstern, *The Theory of Games and Economic Behavior*, 3rd ed. (Princeton: Princeton University Press, 1953); the first edition appeared in 1944. According to Hardin, *Collective Action*, p. 24, the Prisoner's Dilemma itself was first discovered in 1950 by Merrill Flood and Melvin Dresher. A. W. Tucker, a game theorist at Princeton University, later gave the Prisoner's Dilemma its name. For the personal reminiscence of one of the early researchers who worked on the Prisoner's Dilemma, coupled with survey of the studies of the dilemma up to the mid-seventies, see Anatol Rapoport "Prisoner's Dilemma—Recollections and Observations," in Rapoport, ed., *Game Theory as a Theory of Conflict Resolution* (Dordrecht, The Netherlands: D. Reidel, 1974), pp. 17-3. Interestingly enough, despite the commonality between the Prisoner's Dilemma and the public-goods problem, Samuelson in "Pure Theory of Public Expenditure and Taxation" dismissed all game theory because "except in trivial cases, [it] propounds paradoxes rather than solves problems."

Consequently, they both confess, despite the fact that they both collectively would have had much lighter sentences if they both refused to confess.

The public-goods problem is essentially a Prisoner's Dilemma with many prisoners. I cannot delve into the details here of the recent work, both theoretical and empirical, of such game theorists as Michael Taylor, Russell Hardin, and Robert Axelrod, but essentially they have explored the Prisoner's Dilemma within a dynamic rather than static setting. Their conclusion: whereas in a static single Prisoner's Dilemma, cooperation is never rational; in dynamic iterated Prisoner's Dilemmas, with two or more people, cooperation frequently becomes rational for even the most narrowly self-interested individual. What this exciting work implies is that in many real-world dynamic contexts, ideological altruism or some similar motive beyond narrow self-interest may not be necessary at all to counterbalance the free-rider incentive.⁴³

V

I now arrive finally at my conclusions respecting national defense. We have seen that putting domestic limitations upon the power of the State is a public-goods problem, but nonetheless one that in many historical instances for whatever reason has been solved. We have also seen that national defense, in the sense of protecting the people from a foreign State, is a subset of the general problem of protecting them from any State, domestic or foreign. Consequently, the factors that already provide protection from the domestic State are the very factors which on the market would provide protection from foreign States. To put it concretely, the same social consensus that has voluntarily overcome the free-rider obstacle to protect the United States, one of the most free, if not the most free, nation in the world would voluntarily overcome the free-rider obstacle to protect American freedom from foreign States.

The policy implication of this analysis is, to say the least, very far-reaching. Rather than justifying State provided protection, the fact that national defense is a genuine public good offers a powerful

⁴³R. Hardin, "Collective Action as an Agreeable n -Prisoners' Dilemma," *Behavioral Science* 16 (September 1971): 472-81; Michael Taylor, *Anarchy and Cooperation* (London: John Wiley & Sons, 1976); Hardin, *Collective Action*; and Robert Axelrod, *The Evolution of Cooperation* (New York: Basic Books, 1984). Axelrod confines himself to two person dynamic Prisoner's Dilemmas, while both Taylor and Hardin consider n -person iterated games. For a good review of the growing literature on n -person games, see Dawes, "Social Dilemmas." The conclusion of much of this work was anticipated by Brubaker, "Free Ride, Free Revelation, or Golden Rule," who tested for cooperation on public goods with pre-contract excludability.

argument for unilaterally disarming the State.⁴⁴ In current American political discourse, unilateral disarmament has become an emotion laden term. Radical opponents of current United States military policy are often tainted with the term, although almost none of them actually dare to take that position. So let me be specific about what I mean by unilateral disarmament.⁴⁵

By "disarmament," I mean disarmament of the State. Prior to this point, there has been no mention of private protection agencies as alternatives to the State for national defense. The notion of a private agency replacing the United States government's military establishment seems exotic at first glance. But once we appreciate the equivalence between protection from foreign States and protection from the do

⁴⁴Strictly speaking, my argument has applied to the provision of national defense with taxation or some other coercive measure. Thus, it challenges the use of such measures by private alternatives. Some might also speciously conclude that it allows for the provision of defense by a State that does not collect taxes. To fully explain why I believe the idea of a voluntary State is a contradiction in terms would involve us in the lengthy philosophical debate between anarchist and minarchist libertarians. Suffice to say, without the public-goods argument, those who still advocate State-provided protection must present a different argument for entrusting this service to the State. Until then, I will merely point out that entrusting national defense to a State that does not collect taxes, at least to support that service, would achieve the worst of both worlds. It would abandon the only apparent advantage of having the State provide this public good, the ability to coerce free riders, but would maintain all the other obvious disadvantages of State-provided protection.

⁴⁵In Britain, unlike the U.S., significant segments of the peace movement do advocate unilateral disarmament, but even there, many of them view this as a realistic possibility only because of the existence of the U.S. military establishment. Within the U.S., the only individuals actually to endorse unilateral disarmament have been those who believe non-violent resistance is a practical alternative. They have recently begun to refer to themselves as the transarmament movement, because they wish to "transcend" reliance upon arms for defense. Their most prominent proponent is Gene Sharp. See his *Making Europe Unconquerable: The Potential of Civilian-based Deterrence and Defence* (Cambridge, Mass.: Ballinger, 1986), has been recently published. Others who have explored this option both here and abroad are Anders Boserup and Mack Andrew *War Without Weapons: Non-Violence in National Defense* (New York: Schocken Books, 1974); Dietrich Fischer, *Preventing War: A Policy for Britain* (Totowa, N.J.: Rowman and Allanheld, 1984); Stephen King-Hall, *Power Politics in the Nuclear Age* (London: Victor Gollancz, 1962); Adam Roberts, ed., *Civilian Resistance as a National Defense: Non-Violent Action Against Aggression* (Baltimore: Penguin Books, 1969); and Mulford Q. Sibley, ed., *The Quiet Battle: Writings on the Theory and Practice of Nonviolent Resistance* (Chicago: Quadrangle Books, 1963).

I believe this perspective has much to offer. It is more sensitive to the role of legitimization in the power of the State than any of the more conventional perspectives. Nevertheless, my policy proposal departs from this perspective in two very significant features: (1) it envisages military defense organized without a State, whereas non-violent resistance rules out military defense altogether; and (2) it rules out any kind of defense provided by the State, whereas most of the transarmament advocates favor nationalized non-violent resistance. They have no objection to the domestic State employing taxation and in some cases even conscription in order to implement non-violent resistance.

nestic State, we reach the startling realization that many private protection agencies exist right now. They are the same institutions currently protecting Americans from the United States government's attempted violations of life, property, and liberty—institutions from the American Civil Liberties Union, at one end of the political spectrum, to the National Rifle Association, at the other. Obviously, these existing private protection agencies might have to change their tactics when confronting a foreign State. Or new agencies might have to arise. But the private sector might very well have to respond similarly if the United States government itself were to undergo some radical transformation, say, from democratic to dictatorial. And in both these instances, non-military methods of protecting liberty might still remain more effective.

If members of the American Civil Liberties Union, the National Rifle Association, and numerous other similar organizations within our society behaved as the public-goods argument predicts, they would all pack up and go home.⁴⁶ The fact that they do not do so implies that, despite the free-rider problem, more efficient private military alternatives could take the State's place, if it were disarmed. Thus, a more apt term than "disarmament" for my recommended policy would be "denationalization of defense."

The word "unilateral" when applied to Cold War disarmament conveys the unfortunate impression that the user prefers a world in which the United States government is disarmed while other States, such as the Soviet Union, remain armed to the teeth. All that I mean by unilateral is that the disarming of one State need not be made conditional upon the disarming of another. I believe this for roughly the same reason that I believe that the elimination of one State's

⁴⁶The continuing success of the National Rifle Association is frequently commented upon, but many observers jump to the misleading inference that the NRA is a lobby. For a recent instance, see Bob Sexter and Karen Tumulty, "Victory Spotlights Power, Strategy of NRA Lobbyists," *Los Angeles Times*, 11 April 1986, pp. 1, 28. If they mean the term "lobby" broadly to include any group that attempts to influence public policy, then this inference is correct. But the narrower meaning of the term "lobby" restricts it to groups that attempt to influence public policy for *private pecuniary* benefit, such as when automobile manufacturers band together for import quotas. If the NRA represented mainly gun manufacturers, then it would be a lobby in this sense. But it clearly represents gun owners. Furthermore, these gun owners work assiduously to protect the right to gun ownership of the entire public. Like defense of the public generally, defense of the right to gun ownership is a public good with a very large public. Thus, according to public-goods theory, the NRA could never exist. It does no good to argue that many in the public do not care about their right to own guns. That only reinforces the free rider incentives *against* the NRA. Because now we are talking about not only a public good with a large public, but also a public good that most of the beneficiaries do not value highly. Yet, the efforts of the small number who do value this public good highly are enormously successful in its production.

trade and immigration barriers need not be made conditional upon the elimination of another's barriers. Thus, a more precise word than "unilateral" is "unconditional."⁴⁷

Ideally, I hope for a world in which all States have been disarmed. Although many of the formal economic models of international relations are not very sanguine about this eventuality, this analysis points to two possible shortcomings in such models. First, they are generally built upon a static formulation of the Prisoner's Dilemma whereas dynamic formulations are more realistic and more likely to predict cooperation. Second, they generally commit the nationalist fallacy of composition, ignoring the interactions of the State with its own and foreign populations. Like the public-goods theory they emulate, these models are very good at explaining the cases where disarmament fails. They do not do so well at explaining the case where disarmament succeeds—as for instance, along the United States–Canada border since 1871.⁴⁸

It is beyond the scope of this paper to work exhaustively through all the international consequences of the positive relationship between the domestic power of the State and its subjects' perception of a foreign threat. In general, ideological dynamics create a symbiotic interdependence between hostile States. The dampening of plausible foreign threats should eventually lead to the kind of genuine mutual disarmament that the intuitive, less formal models of the arms race have always suggested. Although an unconditional denationalization of defense would involve the replacement of the State's military with

⁴⁷I am indebted to George Smith, "Thoughts on Unilateral Disarmament (unpublished ms., 1982), for clarifying some of these terminological questions.

⁴⁸Britain and the U.S. demilitarized the Great Lakes in the Rush-Bagot Treaty of 1817. The process of disarming the entire border was not complete until 1871, however. Both Philip Noel-Baker, *The Arms Race: A Programme for World Disarmament* (London: Atlantic Books, 1958), and Boulding, "The World War Industry as an Economic Problem," appreciate the significance of this example.

Economic studies of international relations that share these weaknesses include Lee, "The Soviet Economy and the Arms Control Delusion" and Tullock, *The Social Dilemma*. Most of the economic work in these areas has focused upon alliances. See for instance Mancur Olson, Jr., and Richard Zeckhauser, "Collective Goods, Comparative Advantage, and Alliance Efficiency," in Roland N. McKean, ed., *Issues in Defense Economics* (New York: National Bureau of Economic Research, 1967), pp. 25-63.

Tullock is a most egregious example, because on top of other problems his model simplistically assumes that military protection always enjoys increasing returns to scale. He could profit greatly by incorporating some of the insights of Kenneth J. Boulding, *Conflict and Defense: A General Theory* (New York: Harper and Row, 1962) about the State's multi-dimensional force gradient, which degrades over distance, or David Friedman, "A Theory of the Size and Shape of Nations," *Journal of Political Economy* 85 (February 1977): 59-77, about the limitations upon a nation's size arising from the State's desire to maximize tax revenues.

private alternatives, those alternatives by being divorced from the State would be divorced from the primary means of foreign conquest. Thus, the unconditional disarmament of one State should actually help hasten the day when all the world's States are disarmed.⁴⁹

Of course, the denationalization of defense will not make a society invincible. Luxembourg without an armed State could hardly protect itself against the combined forces of a militarized Germany and a militarized France. But then neither could Luxembourg with a fully armed State. The more important comparative question is which institutions in our "imperfect" world would do the best possible job of protecting the lives, property, and liberty of the Luxemborgian people. I believe that the denationalization of defense would not only reduce the likelihood of foreign conquest but also would limit the oppressiveness of conquest when it cannot be prevented altogether.

Most readers will have noticed that I still have failed to address one major problem. Granting that the unconditional denationalization of defense would be beneficial, how is this policy ever to be implemented? The production of disarmament itself is a public good, confronting the same free-rider obstacle that confronts every non-excludable good and service. Should a majority come to endorse this policy, the narrow special interests who benefit from an armed State would still be willing to commit a lot of resources to keeping the State armed.

The solution to this final "political failure" has of course been implicit throughout the analysis. Like all significant gains in the history of civilization, the disarming of the State can only be accomplished by a massive ideological surge that surmounts the free-rider obstacle. But this seeming difficulty only enhances the policy's attractiveness. By the very act of disarming the domestic State, the people will have forged a tool for protecting themselves from foreign States.⁵⁰

In conclusion, the public-goods argument fails to justify the State's protection. Indeed, it utterly fails to explain either the func-

⁴⁹See Jeffrey Rogers Hummel, "Deterrence vs. Disarmament," *Caliber* 9 (October/November 1981): 8-10; "On Defense," *Free World Chronicle* 2 (January/February 1984): 18-23; and "A Practical Case for Denationalizing Defense," *The Pragmatist* 3 (April 1986): 1, 8-10, and (June 1986).

⁵⁰As Boulding, "The World War Industry as an Economic Problem," notes: "It is a striking testimony to the power of the underlying drive toward the ultimate payoffs of disarmament that in spite of two world wars, the hypocrisy of governments, and the weighing of the bargaining organization so strongly against it, the movement toward disarmament refuses to die" (p. 25).

I might also note that unilateral but total disarmament of the State has the advantage of being, like the total abolition of slavery in the past, a Schelling point, to use the obscure jargon of game theorists, and a particularly prominent Schelling point

tions or origins of the democratic State at all. Because of the inherent public-goods nature of political action, the State in practice produces very few genuine public goods. The most important public goods in the progress of civilization have been ultimately produced outside the State, either directly, or indirectly through influencing State policy.

The democratic State cannot even take credit for the incidental protection its subjects receive as an externality from its protection of its own prerogatives. The ultimate source of that externality is greater liberty, which is not a gift generously bestowed by the democratic State. Liberty too is a public good, perhaps the most valuable of all. Like any other public good, it must be wrenched from the State through political action. This adds new depth to the cherished maxim "The price of liberty is eternal vigilance." The State is not some convenient short-cut for either the production or protection of liberty. Liberty is only secure among a people willing voluntarily to shun the free-rider incentive and to protect it themselves.

at that. On the importance of Schelling points to social change see Friedman, "Many Few, One." This feature alone gives my policy a far higher probability of ever being practically implemented than something like the demand-revealing process for voting of public-goods theorists. Even trained economists have some difficulty clearly articulating the workings and benefits of the latter.