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THE FEDERAL TREASURY AS A COMMON POOL RESOURCE
AND THE DEVELOPMENT OF A
PREDATORY BUREAUCRACY

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The Federal Treasury as a Common Pool Resource and the
Development of a Predatory Bureaucracy

Pessimism over the prospect of reducing the size and scope of government is pervasive. As Ralph Winter recently noted in Regulation, part of the basis for this pessimism is that elections become less and less relevant to outcomes as government grows. In this immobilizing ambiance government grows apace with anti-government sentiment. The general purpose of this paper is to provide an important reason for this paradox of big government in such a hostile milieu. We contend that elections fail to control government size and growth due to specific failures in the representative system. One major failure has been the concentrated focus of political activities within bureaucracies. This shifted focus away from the representative arena is a result of placing increased responsibility for administering the "transfer society" in the hands of the bureaucracy. At both the level of individual interaction with agencies and the level of inter-agency interaction the pervasive result of government growth, as distinguished from absolute government size, are manifest. It is time to suggest plausible modifications.

Government Size: Divergence of Individual and Social Cost

Economic interaction in the United States has occurred primarily within the market system. Adam Smith, in the eighteenth century, prophetically saw the ability of unfettered markets to facilitate mutually beneficial transactions in complex settings - the "Invisible Hand." Alas, for all their virtues, markets sometimes fail.

The Invisible Hand acts decisively on existing resource information as reflected by the market price of resources. Goods are supplied according to the additional benefits and additional costs of doing so; output is constrained by the price of inputs. If the total social costs of inputs, i.e. all costs including those external to the producer, are not reflected by the actual market price of the input, then the price of the product does not reflect the total value of what society gave up in order to have that good. In other words, if externalities are present, the market price does not account for the total opportunity cost of the good.

For example, the notion that "air is free" is taken to heart by the Invisible Hand as it allocates resource use. Air is treated by individual producers as a cost-free dump for by-products of production. In general, where property rights to resources are poorly defined and enforced, perceived private costs (or benefits) and true social costs (or benefits) diverge. The output that results under a scheme of divergent individual and social costs or benefits is non-optimal.

Other potentially important market failures also include the existence of: a) market power, and b) public goods for much the same reason: divergence of perceived individual and social costs or benefits. In the case of market power (monopoly, duopoly, oligopoly are common references), the social value of additional units of output is greater than the cost to the producer but the benefits of these additional units to the producer are less than their cost. Unless we have a perfectly discriminating monopolist, the result is both restricted output and a higher price than is socially optimal. To economists, this is the familiar problem of the lost "welfare triangle."

In the case of public goods,^{1/} (the textbook example is national defense), the total cost of providing the good may be greater than the benefit to any single individual while the benefits of the good summed over all of the beneficiaries in society are greater than the total cost of provision. This total cost and individual benefit divergence, plus the problem of individuals holding out in hopes that others will provide the good so that they need not contribute (the "free rider" problem stressed initially by Olson, also results in a socially sub-optimal amount of public goods provision in the absence of coercion.^{2/} To summarize, in all of these instances the individual decision process results in outcomes which are not as they would be if total social costs were taken into account.

Ironically, government in the role of public-interest maximizer fails for the same reasons markets sometimes fail. The perceived costs of individual decision-makers in government do not accurately reflect the total social costs of their decisions; government fails because perceived individual costs and true social costs diverge. Hence, we expect government output to be socially non-optimal and government itself to be too big. Since the focus of this paper is on bureaucracy, here is an example.^{3/}

The National Forests of the Rocky Mountain states are much less productive for growing trees than the National Forests of Oregon and Washington. The greater value of most Rocky Mountain forest lands is for recreation. Timber practices on these lands however, have often been destructive of these relatively higher recreational values, Clear-cutting is a prime example. Much of this harvested timber literally has

negative value as timber. So, in this less productive timber area, the true social costs of timber practices, e.g. the opportunity cost of the diminished value of camping trips to a clearcut area, were often discounted by forest managers. Since some social costs were not considered, the resulting timber output is socially non-optimal. After all, foresters are trained in forestry-output and that is largely a religious training.

Government Growth: Dispersed Costs and the Transfer Society

It has been argued thus far how the size of government is socially non-optimal. It can further be argued why government grows. The reason can be traced to two ideas: 1) that government will succeed in overcoming the problems which cause markets to fail, and 2) that investments in influencing governmental decisions may be profitable. While the first belief lacks compelling corroborating evidence, it continues to flourish. The second, unfortunately, is in fact substantially correct under the presently existing institutional structure. While it is the divergence between the costs faced by the individual decision-maker and the total social cost resulting from his decision that makes government too big, it is the increased propensity of government decision-makers to generate concentrated benefits to special interest groups that leads to government growth. The ability of government to disperse the costs of this concentrated benefit generation over all taxpayers (or even onto future elections and generations) could perhaps be termed a "hole in the dike" which allows these increased transfers.

Anderson and Hill provide substantial evidence in support of the argument that the U.S. has recently become and is continuing to be an ever-larger

"transfer-society."^{4/} As they state in their introductory chapter,

. . . the early American experience was one in which transfer activity was very limited and productive activity was encouraged. But because of the alterations in the institutional framework or the rules under which economic activity takes place, that situation has reversed. We are now a society in which transfer activity is encouraged at the expense of productive activity." 5/

Their argument hinges on the idea that the continuous altering of social rules, i.e. the court's interpretation of the Constitution, has favored transfer-seeking activities. Since transfer-activities occur in the political arena, then the result of the continuous changing of the rules in favor of transfer-seeking has resulted in government growth and will continue to have that impact as long as the rules are so altered.

An important conclusion to be drawn from the preceding is that more support for a bureaucratic agency can be generated by increasing benefits selectively than by reducing costs generally. It is bureaucratically profitable to cultivate a concentrated group of beneficiaries. In the clear-cutting example, this group was the commercial timber interests. We could not overstress the importance of understanding that government growth is the result of rational behavior. Hence, it is patterned and, thus, predictable. We can understand its cause. Favor-seeking and favor-provision is marginally beneficial! Anderson's and Hill's "transfer society" flourishes. Further, as government grows, more individuals learn to play and have a stake in the game. Few realize, or are forced to account for, the social costs of personally beneficial programs. The costs are dispersed over all taxpayers. But individuals do realize that self-denial will not be reciprocated; giving up their benefits does not mean that they do not have to pay for programs.

beneficial to others.

The aforementioned propensity of government to increase the practice of transfers requires an administrative force to carry out the transfers. It is this shifted focus toward bureaucratic administration of transfers which leads us to the following examination of bureaucrats and the treasury commons. Non-reciprocated self-denial is as operative a principle among agencies as it is among their "beneficiaries,"

Bureaucrats and the Treasury Commons

The term "bureaucrat" will be used to identify the decision-makers in government administrative agencies. Typically, these individuals are public servants whose public actions are presumed to be in the public interest. As the outcomes of bureaucratic activity are closely scrutinized, it becomes increasingly apparent to many observers that our public servants often produce results that can only be regarded in the interest of some concentrated groups and, also in the interest of the bureaucrat who generates these benefits. When this conclusion is reached, cynical condemnation of the public servants often follows. While this may provide psychic unguent, it retards remedial action by diverting attention from the causes of perverse bureaucratic outcomes. Focus on "bad" bureaucrats clouds the issue of underlying importance. Bureaucrats of even the "purest intentions" cannot be expected to produce results consistent with the welfare of their "wards" if by so doing they harm their own professional welfare.⁶⁷ Since bureaucratic outcomes are frequently in violation of their "public interest" functional designs and bad intentions cannot be assumed, we contend that the incentive structures faced by bureaucrats are of a perverse nature;

incentives are responsible for outcomes. There has been little talk of rigging the rules of the bureaucratic game, i.e. manipulating costs and rewards, in order to reduce this curious asymmetry between designed purpose and actual outcome. This section provides the behavioral basis upon which the final section develops an ameliorative model of the predatory bureaucracy.

Garrett Hardin defines common pool resources to lack exclusivity of ownership.^{7/} As a result, demands upon the resource can be expected to exceed its capacity to meet them. This point indicates that some positive net utility is individually perceived from all captured portions of the commons; the individual receives all of the benefits from captured portions while the costs of his actions are dispersed over the community of users in the form of lost capture opportunities. Rationality dictates ever increasing capture as sensible to each individual. Hardin concludes that when all users pursue their own interest in a commons the outcome is tragic to the productivity of the commons and, hence, to the users.^{8/}

In justifying treatment of the treasury as a commons, it must be immediately recognized that the community of users, in this case, is the entire federal bureaucracy. While "ownership" may be a questionable expression in terms of semantics, it has explanatory advantage. If anyone can be said to own that portion of the treasury allocated to bureaucratic purposes, it is the appropriations committee of Congress. However, as shall be argued in the next paragraph, the effective ability of Congress to exclude bureaucrats from the treasury is weak. In an important sense, this brings into question whether or not the existence of exclusive rights over the treasury actually "belong" to Congress.

At first glance it appears that since the budgets of agencies are determined by the "owner" of the treasury (Congress), no access rights are held by the agencies. One could then draw the conclusion that agencies exist as a result of careful review of their relative success at fulfilling designed purposes. Recurring evidence of the divergence between designed intent and actual outcomes of the bureaucratic process casts serious doubt upon both premise and conclusion. While technically no rights to existence reside within any agency, their power to extort these means of existence away from the Congress are great. Rourke's examination of the cultivation of powerful clientele groups and specialization of functions,^{9/} plus McKenzie's and Tullock's model of the monopsonist-monopolist relationship of government to agency^{10/} add credence to the viewpoint that the exclusive rights of the appropriations committee over the treasury are very weak indeed. Real world examples of this political clout possessed by agencies reinforces the view that agencies are actually powerful enough to claim rights to existence and, thus, to the treasury. When all agencies can do so, the treasury is essentially fair game to all—the essential ingredient to the existence of a common pool situation.

Please note that rights to agency existence can become independent of their designed function. Over-riding concerns of bureaucrats become cultivation and expansion of the means of existence. It should be carefully noted that this diversion of resources to the continued existence of the agency is a result of institutionalized incentives, not due to some inherent malevalence found in public servants.

A second characteristic of the treasury which justifies its analysis

as a commons is that demands upon the resource exceed its ability to supply them. The treasury at a given point in time is finite while wants are not. If this were not the case, there would be no need for appropriations committee hearings to decide upon the distribution of "pie slices." Certain interested observers may contend that supply is adequate or exceeding any "reasonable" demands (as specified by the observer's subjective criteria), but all acknowledge that agencies compete for budget and, therefore, budget is scarce. The ability of bureaucrats to pressure for an ever larger size of the pie, as their incentive structure suggests that they will, is a different matter taken up later in this paper.

Do bureaucrats behave as Hardin's model predicts actors in a commons will behave? For a commons to be exploited, individual calculus must dictate that the pursuit of self-maximization be of primary importance. In the case of the career bureaucrat, the maximization of personal welfare becomes inextricable from the maximization of his agency's welfare, particularly its budget. Agency welfare measures include expansion of its employment capacity and expansion of its scope over many activities, both of which entail increased funding levels. An important measure of the bureaucrat's professional welfare is his discretion over the allocation of resources within his agency.

Certain reservations are in order before assenting to the idea that bureaucrats are self-maximizers. Risk aversion and the long-run career orientation of bureaucrats may categorize them as "satisficers" (to borrow from Herbert Simon).^{11/} That is, bureaucrats aim at a "satisfactory" rate of agency and personal interest increases by strategically

and carefully applying their continually cultivated treasury extortion factors. Bureaucrats maximize their self-interest, or utility function, subject to the constraints imposed by the incentive structure in which they operate. While this is not necessarily the same as maximizing profits,^{12/} it is sufficient for our purpose of stating that self-interest maximization is an important ingredient in the bureaucratic arena. Self-interest is also the driving force behind the tragedy of common pool resource destruction.

The Tragedy of the Treasury Commons

The elements contributing to a commons—non-exclusive ownership and self-maximizing behavior of actors—exist in sufficient quantity that one may justify labeling that portion of the treasury allocated to bureaucratic budgets as a commons. Accepting the treasury as a common pool resource allows the application of Hardin's "tragedy of the commons" model. Essentially, the logic as it applies to this case is as follows. Seeking to maximize his gain, each bureaucrat realizes that he has clear access to the treasury. He can be seen as asking the question, "What is the gain to my organization (hence, to me) of capturing another increment of the treasury?" All of the gain would go to finance his agency's activities while the costs of his capture are spread among the entire community of bureaucrats in terms of lost capture opportunities. All bureaucrats realize the same calculus holds for them and that it is rational for each to capture additional increments of the treasury. Each bureaucrat being compelled to increase his capture of the budget, he must find ways of increasing his agency's magnitude and scope. While Hardin deals with the analogy of human-ecosystem

interactions (his example is of herdsmen on a common pasture), human-human interactions are equivalent. Some ensuing implications of the "treasury commons" tragedy deserve mention.

First, negative spill-overs in terms of lost opportunities to the bureaucratic community due to the independent, or "free", actions of individual bureaucrats would indicate a fervent sense of competition over budget capture. Since agencies are handed the task of administering the increasing transfer society, the incentive to pressure for an ever increasing portion of the treasury has led to an increased treasury. The ameliorative of inter-agency predation is rendered impotent when it is made easier to receive funding by increasing the size of the pie from which your share is sliced. A lesson well-learned in the commons is that self-denial will not be reciprocated. Given that bureaucrats operate within the "treasury commons," should this lesson not be as apparent to them? One fails to see why it should not.

Second, in the absence of signals such as prices and consumer preference and in response to increasing pressures to justify higher expenditures enabling larger budget captures, investment in agencies' programs at non-optimal times and in non-optimal amounts is to be expected (and is evident). It is a significant failure of government that often the discount rate of elected officials and bureaucrats is greater than that reflected by inter-temporal decisions made in the marketplace. While government is often criticized for being too concerned with future generations, it is also true that costs of government can and are sloughed-off onto future elections and even unborn generations through government shortsightedness. The ability

to disperse costs is a two-edged sword that cuts equally well in either direction, present or future.

Third, the chance to attain some spill over benefits to the community of bureaucratic users may be realized. Through the introduction of some collusive mechanism, it would be possible for community members to magnify their individual extortion factors through mutually beneficial arrangement. While community restraint through "mutual coercion mutually

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agreed upon" can avert the tragedy of the commons, - we assert that cooperation among agencies has the potential to further intensify demands upon the commons.

Fourth, it is in the interest of all bureaucratic community members to maximize the "size of the pie" from which their individual budget captures arise, as was alluded to in the first implication. One infers from the logic of the commons that treatment of the commons to the best ends of the bureaucratic community would favor increasing the absolute size of the commons rather than utilizing it in a cost-efficient manner. Thus far, the ability of actors within the bureaucratic incentive structure to divert ever increasing amounts of society's productive capacity to their own ends has proven formidable. The bureaucratic process allows the generation of concentrated benefits for special interest groups. Simultaneously, the costs of providing such benefits can be dispersed and hidden. Costs of regulation, costs of inflation,^{14/} and the previously mentioned ability to bestow costs of present decisions upon future generations are all examples. Empirical validation of the inference tends to increase the credibility that this analysis deserves.

To conclude this discussion of the tragedy of the treasury commons, one must realize that it is the willingness of individuals to pay taxes which ultimately limits the treasury. It is the taxpayer's income which, unwittingly or not, actually falls prey to the institutional commons. Losses inherent to the "tragedy of the treasury commons" are borne by all society members in the form of lost control over productive resources and a relaxation of the rule of willing consent. As more decisions over any individual's resources are made without his consent, the greater is the chance that a decision will be unsatisfactory to that individual. This will affect each of us as the scope and magnitude of the public sector increases. By most criteria, then, these losses are in a currency of ever increasing scarcity—freedom in everyday life. As Hardin so aptly states, "Freedom in the commons brings ruin to all." Pursuit of bureaucratic self-interest in the treasury commons is predicted to bring tragedy when all bureaucrats, according to their incentive structure, set such a course.

As promised in the introduction, the final portion of this discussion advances an ameliorative device. Through the restructuring of incentives, i.e. by re-rigging the game, bureaucratic outcomes can be made to approach the elusive social optimal. This device has been named the Predatory Bureaucracy.

The Development of a Predatory Bureaucracy

Several generations of economists and others interested in policy analysis have noted that a very substantial proportion of legislation has socially wasteful impacts. At a time when many resources are per-

ceived as becoming more scarce, many people are disturbed by this waste. Further, most of the above economists bemoan the brute reality that their analyses are noted and then ignored - or merely ignored - in the political sector. Except for those lost in the wonder of their display of analytical creativity, a reaction of hurt resignation is fully expected. Hence, the economist applying cost benefit analysis to federal projects is a contemporary analogue of Sisyphus. Rather than rolling stones endlessly up slopes never to reach the top, the analysts are compelled to unroll printout before committees whose lenses have been ground by the special interests noted above. It is not that the analysts' products are necessarily flawed, it is merely that their political environment is unreceptive. Hence the potential utility of their product is unrealized. Neither good intentions nor good products, not even this conjunction, will suffice. Too many interests have too large an incentive to ignore the output.

Decisions are made on the basis of information and incentives. In the case we address, there is little incentive to utilize the information available. There is at least one obvious institutional solution to the problem, i.e., the creation of a "predatory bureaucracy."

The literature on bureaucratic pathology is voluminous and growing rapidly. In its traditional form it exists in Public Administration, in Political Science and in Sociology. Recent advances, however, have come largely from applying economic logic to the area. The bottom line of studies from each of these areas remains fairly consistent with the following: bureaucrats operate to increase their discretionary control over resources. In sum, they operate to expand their budget.

Writing on the Civil Service Reform Act signed in October of 1978, Stephen Miller, a Resident Fellow at the American Enterprise Institute notes that:

"Of course the new law will not solve the problem of bureaucracy. Nothing really will. Bureaucracy is less a problem than a disease of modern civilization, one that can be treated but not cured. Like air pollution, one can't do away with it altogether.15/

and goes on to state that:

Given the dynamics of the Washington establishment, it is extremely difficult to eliminate ongoing programs. In order to do so, a counter-consituency has to be organized, one that is strongly opposed to a particular program. But it is hard to organize people to oppose something unless they have compelling reasons to do so. People are against inflation, bureaucracy, unemployment, or abortion; rarely are they against a particular federal program. Once a program - or a set of programs organized under the rubric of an agency - is put into motion, it tends not only to stay in motion but also to stay on the same course, not changing its way of doing things until scandal throws it off course."16/

Thus far we have indicated why governmental budgets have a strong propensity to grow and noted a generalized recognition of a near cancerous bureaucratic pathology. Further, we have stated a rather obvious but fundamental belief that decisions are made on the basis of information and incentives. Finally, we have stressed that the current institutional setting fails to provide those incentives requisite to successful efforts at budgetary reduction. Yet there are grounds for cautious optimism. Clearly there exists, at least in principle, a substantial potential for institutional modifications that will ameliorate the problem of growth in the governmental sector. The fundamental issue is one of designing an institutional environment that will provide incentives to utilize information erosive to agency budgets.

A predator is an animal (or occasionally a plant) that captures and extracts his sustenance from other animals. Could this mode of existence

be replicated and introduced in a bureaucratic environment to provide a negative feedback to the propensity for bureaucratic growth? Conceptually the answer is yes - but objections should be anticipated. First, what is the structure?

Assume that an agency, The Bureau of Budgetary Control, is initiated as a one sided agency, i.e., like the E.P.A. it is admittedly designed to represent one position and serve as an advocate of one fundamental goal. Like the EPA whose primary mission is not to perform benefit-cost analyses but rather to advocate protection of the environment at whatever cost, the Bureau of Budgetary Control would advocate budgetary reductions. The design problems become (1) providing incentives to perform and (2) structuring incentives for this bureau to predate upon those budgetary items whose social costs promise to swamp the social benefits.

Further, assume that this agency is established with a one time appropriation that will carry it for two years only. This constraint is critical. It is at this point that we harness the fundamental pathology of bureaucracies, that glacial like propensity toward perpetuation and growth, for social benefit. Continual funding, and hence survival and growth, are dependent upon predation of other agencies budgetary requests. We above quoted the sentence, "But it is hard to organize people to oppose something unless they have compelling reasons to do so." This strategy provides compelling opportunities for the proposed Bureau of Budgetary Control.

Assume for example that the Bureau of Reclamation requests \$250 million dollars to rebuild Teton Dam, again primarily as a flood control project. A number of local farmers who grow subsidized grain and sugar beets continue to support this project. While it is obvious that if

some dams fail to fail we may be overbuilding dams, i.e., the safety factors may be too high on the margin, it is also obvious that this particular project is of extremely dubious value on net. Hence, the Bureau of Budgetary Control would marshal evidence against the project in direct opposition to the testimony of advocacy developed by the Bureau of Reclamation and its clientele. Of course the BBC would also have strong incentives to develop clientele groups.

If the proposal for funding the rebuilding of Teton Dam is rejected by Congress then two budgetary transfers are made. First the BBC receives one percent of the requested budgetary item. Second, the proposing agency, in this case the Bureau of Reclamation suffers a budget cut of one percent of the projects proposed operating costs from its operating budget. These figures are strictly arbitrary and are likely to benefit from adjustment based on experience.

The major advantage of this proposed system is that it counters the problem of legislation concentrating benefits while diffusing costs. Further, it builds into the appropriation process a spokesman for the public interest - more importantly, a spokesman who does good while doing well. In sum, by employing this system we rely upon self-interest to advance the public interest. There are, of course, a few technical problems with this proposal but they are likely to be minor when compared with the benefits.

One likely objection is fundamentally visceral, i.e., the charge that we are creating another bureaucracy. Such a creation, presumably is bad a priori - and the objection is understandably emphatically. It will not, however, bear analysis. A bureau is merely a tool of social

organization. As such it must be evaluated in terms of its output rather than its mere existence. Clearly the incentive structures in bureaucracies often lead to socially costly outcomes associated with goal displacement, growth past the point where marginal social costs exceed marginal social benefits and a host of other pathologies. In this case, however, we harness this incentive structure as a negative feedback to counter the pathologies. Analogies to this situation common in the area of medical biochemistry.

The second objection may be that the BBC may kill some worthwhile programs. Indeed it might. All drugs, especially the most useful, do as a matter of fact kill some patients. So do seat belts. If the agency, however, beneficial or net? Clearly such an agency as the BBC would select as prey the programs that are the most vulnerable to attack, i.e., those whose social payoffs are demonstrably highly negative. The size of the BBC is, to put it crudely, a function of the stupidity of the prey agencies. A series of successful attacks is very likely to have a profound effect upon the learning curve of the various agencies. First, successful attacks are likely to generate doubts regarding the worth of other programs. Since the agencies are uncertain regarding which of their programs may be subject to predation, since all are fair game, they will have strong incentives to avoid proposing projects of dubious social utility. Should this be the case policy is likely to be more carefully analyzed. The implications for the economics profession are obvious.

When writing in this area it is increasingly difficult to end cheerfully. Our proposal is merely the first cut on a difficult problem.

We are confident it stands in need of refinement. While our proposal may seem radical when first considered, it will seem less so if reconsidered. In view of the direction the United States has been heading there will be increasing incentives to reconsider. Given the avowedly-experimental character of our political Institutions some proposal similar to ours is likely to capture the attention of at least one political entrepreneur. It is, in the final analysis, difficult to constrain a fundamental optimism regarding the ability of people to learn when self-interest is at stake,

FOOTNOTES

- 1/
- Public goods are those goods for which 1) consumption by one individual does not interfere with the consumption of the same good by another individual and 2) once the good is produced, any individual cannot be excluded by price from enjoying the benefits of the goods' provision. See Paul A. Samuelson, "The Pure Theory of Public Expenditures," Rev. Econ. and Stats., 36 (November 1954): 387-389.
- 2/
- Pigou, A. C., ~~The Economics of Welfare~~, 4th ed., (MacMillan 1932), see especially Chapter 9.
- 3/
- The following example is from John A. Baden and Richard L. Stroup, "The Environmental Costs of Government Action," Policy Review, Spring 1978, pp. 23-36. The example is found in pp. 28-29.
- 4/
- Anderson, Terry L. and Hill, P.J., ~~The Birth of A Transfer Society~~, unpublished book manuscript, January 1979, Montana State University. Quoted by permission.
- 5/
- Ibid., p. 5.
- 6/
- To request that individuals behave counter to their interests violates the Cardinal Rule of Public Policy: "Never ask a person to act against his own self-interest." See Garrett Hardin, The Limits of Altruism, (Indiana Univ. Press 1977), p.27.
- 7/
- Hardin, Garrett, "The Tragedy of the Commons," Science 162: 1243-1248, 1968.
- 8/Ibid.
- 9/
- Rourke, Francis E., ~~Bureaucracy, Politics, and Public Policy~~, (Little, Brown, and Company, Inc. 1976).
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- McKenzie, Richard B., and Tullock, Gordon, The New World of Economics, Chapter 17, "Bureaucratic Entrepreneurs," pp. 196-210, (Richard D. Irwin, Inc. 1975).
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- Ladd, George W., "Utility Maximization Sufficient for Long-Run Survival," J. Political Econ., July-August, 1968, pp. 478-483.
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- 14/
- Ackley, Gardiner, "The Costs of Inflation," Amer. Econ. Review, 68 (May 1978): pp. 149 - 158.