

Creating Value in the
Public Sector

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I. The Public Sector as a Value Creating Enterprise

Increasingly, government is termed the "unproductive" sector. In a time of deep concern about the performance of the private economy, and broad frustration with the over-reaching of the public sector, this rhetoric is, perhaps, understandable. But understanding the rhetoric does not change the fact that it expresses a deeply flawed conception. Indeed, one might well worry about the judgment of a society that considers the sector that produces lemon scented furniture polish "productive", and the sector that shields the country from foreign enemies, educates the children, and insulates citizens from natural and economic hazards that impoverished all previous human life as "unproductive."

The simple fact of the matter is that the public sector creates value. Some of its production is quite literally concrete. A system of national highways that put distant and remote areas of the country within the reach of all; a network of dams and viaducts that allow farming even in arid lands; and clusters of houses, schools and parks that anchor urban areas have all been built by government. Another part of its production is less concrete and durable, but still tangibly and immediately valuable. Garbage collection, agricultural extension services, immunization from disease, and education are all so obviously valuable that it doesn't strain our imaginations to think of such activities as productive. But much government production is more future oriented or abstract than these services. Investments in research, or the collection of descriptive statistics, or even the maintenance of a system of patents and copyrights may seem to produce little of value in the short-run. Over the long run, however, these activities may equip the society to deal with its environment and manage its affairs more effectively than it otherwise could.

Perhaps the most valuable things the government produces, however, are the most abstract and difficult of all to measure and value: namely, the guarantees that sustain a vision of a prospering and just community - one in which private initiative is protected and rewarded, but also one in which individual citizens and communities are protected from many natural and man-made disasters. Despite its abstract qualities, these guarantees have value to citizens not only as they assume material reality, but also in anticipation - as a basis for confidence in one's own future as well as hope for one's children.

The point of insisting that government creates value is not to argue for big, paternalistic government. It is simply to observe that even the leanest conceptions of government involve a great deal of governmental activity justified in terms of the contributions that government can make to the quality of life for present and future generations of citizens. Indeed, this point is underscored when the

Consider, first, the collection of garbage. In many areas, this is not a public service. Instead, individuals contract for the service with private firms or do it themselves. In other areas, government provides the service, but does so through private contractors rather than public employees. So, garbage collection is not inevitably a government program. Nonetheless, when government provides it, how is value being created?

The most obvious answer to that question is that houses, streets, alleyways, and even entire cities are kept cleaner by the provision of the service. If no convenient way existed for citizens to eliminate the garbage and debris they generated in the ordinary course of living, they would live in more cluttered and smelly environments. If a City as a whole did not have a way of concentrating, reducing, and disposing of some of the material, then the cities as a whole would become even more cluttered and dirty than they now are.

Granted that garbage collection keeps the streets clean, why is that valuable? It is at this stage of the discussion that one departs from objective observations of physical events and enters into the realm of assertions about what citizens do (or perhaps should) value in their lives. One answer to the question of why garbage collection is valuable is simply to assert that tidier cities are more aesthetically pleasing environments in which to live than dirtier cities. Since people feel better about clean cities, value is created by making them cleaner. Stated so directly, the proposition sounds strange, for it suggests that insofar as the government is acting to maintain certain conditions in the city, and is taxing the citizenry to produce the results, it is imposing certain values on its citizens - i.e., a preference for cleanliness. This is particularly embarrassing because the value itself hardly seems like the most significant one to be protected by government operations. Indeed, the value is embarrassingly middle-class.

To deal with this problem, people often find another justification for garbage collection - namely, an interest in protecting public health rather than mere aesthetics. In this conception, keeping the streets clean has value only insofar as it produces a chain of consequences that eventually leads to improved public health: specifically, that keeping organic wastes off streets reduces the rate of which dangerous bacteria are produced (to say nothing of rats which are aesthetic and health risks in themselves), and reduces the likelihood of epidemics. This argument has the virtue of rooting the interest in garbage collection in a much more fundamental value (e.g., the interest in health rather than aesthetics), and the disadvantage of requiring empirical demonstrations beyond the observation that the streets are kept cleaner (e.g., that cleaner streets reduce the likelihood of

trash receptacles, or even frequent announcements about garbage collection methods and procedures. In a more restrictive vein, the obligations might be written into municipal ordinances with attached fines. These efforts can be considered costs for two related reasons. For one thing, such regulations restrict the liberty of citizens, and reduce privacy by encouraging citizens to comment and intervene on the habits of their neighbors. For another, these regulatory efforts use up a very scarce resource of the government - the ability to command the attention of citizens and mobilize them to accomplish given purposes. This resource - the moral authority of the government - is limited by the tolerance of citizens, and in a free society, this tolerance is presumably quite narrow.

In the short-run, then, the value created by publicly provided garbage collection involves the difference between the aesthetic and health benefits produced, and the direct budgetary and authority costs of managing a garbage collection regime. The task of management is to maximize this difference: that is, to produce as much cleanliness as possible with the smallest possible use of the government's money and regulatory authority. But that is not all.

In addition, the regime must cope with a troubling set of distributional questions: How the available garbage collection services should be distributed across income groups, geographic areas, or other dimensions of city life. Many plausible principles exist. One is to allocate efforts to those parts of the city most "in need" to establish a minimum level of cleanliness throughout the city. A second principle might be to apply the effort where it will "do the most good" - where it will produce the largest gains in aesthetics and public health. A third principle would be to give the services to those who value cleanliness the most. A fourth could be to reward private clean-up efforts. In the end, there is no single obviously appropriate principle. Instead, the distributional issue is solved by a continuing political process that channels and holds the competing demands in tension. This political process can be perceived as more or less open, more or less fair, more or less well informed, and more or less reasonable in its decisions. This process, too, creates a kind of value since it either assures or fails to assure citizens about the governance of its public enterprises. If the process is governed well, citizens will feel better about their contributions and benefits than if it is governed capriciously. Since this process of governing also creates value, it, too, must be the task of management.

Finally, there are the questions of adaptation, innovation, and the future. Even something as narrow and concrete as garbage collection is not static. The world changes. Neighborhoods gain or lose population. Private efforts wax and wane. Peoples' interest in tidiness becomes more or less compelling. Labor contracts with

reduced likelihood or seriousness of flu later in the season. Insofar as people are infectious, these may be an important externality in immunizing people since the immunization protects not only the immunized person, but those who have not been immunized and are at risk for the disease only as they come into contact with those that have it. There is a direct cost of producing the benefit, a cost associated with reductions in private efforts to secure immunization, and a small cost associated with the generation of a "movement" towards immunization. Moreover, like garbage collection, an immunization program becomes a set of activities that sustain an institution with a broader set of responsibilities, goals and capabilities. The apparatus that protects against influenza may sometimes be used to immunize against polio, to instruct expectant mothers in proper nutritional habits, or even become part of the apparatus for reducing the damage caused by lead poisoning. In short, just as Chrysler and GM can shift from making large cars to small, or from making cars to making tanks as they did in World War II, public sector organizations may also shift products in response to changing circumstances or changing political demands, and do so more effectively than could be accomplished if one had to start by building the institution anew.

While the similarities between garbage collection and flu immunization are great, there are also some important differences. One is that the immunization program produces an uncertain benefit. The uncertainty is not associated with uncertainty about the program itself: we know that immunization does, in fact, reduce the probability of becoming ill among those exposed to the flu virus. Instead, the uncertainty concerns the likelihood of exposure. This uncertainty itself consists of two different elements: uncertainty about which strain (or strains) of flu virus constitute the greatest threat to the public in the coming year; and uncertainty about which particular individuals will be exposed even if the government guesses right about the most important threats. In effect, then, the government produces protection for some individuals against a threat that may or may not materialize. Moreover, in the case that levels of flu decrease markedly from anticipated levels, it will always be a little difficult to know whether that decrease resulted from a successful immunization program, or the threat never really developing. So, the benefits will always be a little uncertain.

A second difference is that the immunization program will produce some costs as well as benefits: some of those immunized will be disabled for longer, and suffer more than they would have if they had gotten the disease. There will be adverse reactions to the immunization. Such events will be rare, and arguably are dwarfed by the substantial protection the vaccines afford. But to those affected, and to those who see the bad consequences, the immunization

C. Methadone Maintenance Programs:

A third government program interesting to analyze from the perspective of value creation is a methadone maintenance program. These programs are one of the ways the society tries to deal with the problem of heroin addiction. They involve making oral doses of methadone available to heroin addicts on condition that the addicts stop taking heroin and seek gainful employment. Methadone is itself a narcotic drug. Taken intravenously its effects are similar to heroin's. Taken orally, however, the effects are smoother and less disruptive than those of intravenous heroin, and provide the addict with an opportunity to regularize his life. The theory is that since methadone itself is stabilizing, since it seems to block the effects of intravenous heroin, and since it brings the addict into regular contact with a social regime that encourages him to stop using heroin and seek legal employment, the behavior and condition of users' lives will improve. There is some evidence to indicate that this, in fact, occurs, though to a lesser degree than originally hoped: addicts on methadone do seem to get healthier, to engage in more productive activities, and to reduce their criminal activity.

This program, again, looks very much like those that have previously been analyzed. A service is provided to discrete individuals (e.g., methadone and counselling of various types of addicts). This produces benefits to the clients of the program in the dimensions of both health and social welfare. Their improvements in health and social welfare also produces benefits for the rest of the society in terms of reduced claims on social health and welfare systems, and in terms of reduced criminal activity. The prices paid for this include the direct resource costs of inventing, modifying and providing the services, some reduction in private initiative in producing the same results (some addicts would have gotten better by themselves without the benefit of methadone maintenance), and some reduction in individual freedoms (addicts are discouraged from continuing their lives as addicts, and are brought into a program where they are subjected to a high degree of supervision of their conduct). Again, however, there are some important differences in the salience of some kinds of value creation if not their presence or absence.

One key difference between methadone maintenance programs and others we have examined is in the length and complexity of the causal chain that links the outputs of the program (e.g., oral doses of methadone, counselling and supervision) to the outcomes where the greatest social value appears (e.g., durable changes in the social functioning of people who previously were heroin addicts). Of course, a heroin addict receives some immediate benefits of being in a methadone maintenance program through causal chains that are neither

the government from learning and innovating. We never really know whether policies and programs will work until we try them. No amount of theorizing or reasoning can substitute for actual operating experience. If we can't try something new, then, we are limited to our existing repertoires which may be inadequate to deal with a current problem. These observations indicate that we might view government's willingness to run risks with new programs as value creating because it is the only way we can develop new and improved methods for dealing with the problems of the day. The obvious synthesis is that government creates value when it takes "prudent risks" in experimenting with new programs, and loses value when it takes no risks, or takes risks that involve little chance for success and great risks of failure or real harm.

Lest one doubt this proposition it is worth remembering that immunization programs were once risky experiments, and it is only the passage of time and the accumulation of experience that has made them reliable, value creating programs. If the government had been prevented from experimenting with these programs, some important value would have been forever lost from the world.

A third crucial difference between value creation in methadone maintenance programs compared with garbage collection and immunization is the fact that the share of the value that is being created that goes to clients of the program as opposed to the general citizenry is quite different. It was true, of course, that every time an individual citizen had his garbage taken away, or a flu shot provided, others in the society benefitted as well as the direct recipient of the service. The rest of us were glad not to have to look at the other guy's garbage, and its removal made our fight with cockroaches, rats and flies a little bit easier to win. But the point is that the person who received the service got most of the benefits.

In the case of a methadone maintenance program, the situation might be quite different. Even when a heroin addict voluntarily enters a methadone program, there is some uncertainty about who is the greater beneficiary. He gets the benefits of oral methadone, psychological counselling, and so on. But the society at large gets the benefits of reduced criminal activity, and, if the program is successful in its loftiest ambitions, of reduced welfare dependency. In the more ordinary case where the addict enters more or less involuntarily (because the general pressures of maintaining his addiction in a world of prohibited heroin have become too strong, or because he has been diverted to a methadone program rather than stand trial for crimes related to his addiction), it seems far more certain that the society benefits at some expense to the addict - at least the way the addict would currently define his interests. The addict gives up freedom and self-determination. The society gets the benefit of

"readiness" of the Air Force Wing to a reduced probability of war, and there is great uncertainty about whether this chain actually works as hypothesized. As in the case of methadone maintenance programs, it is possible that the Wing reduces "national security" rather than enhances it. Unlike methadone maintenance, however, we may never accumulate enough real experience to know whether the theory is correct. We will always be uncertain about the exact value of the bomber wing; and the beliefs we form about this matter will be based on theory rather than experience. This uncertainty reduces but does not necessarily eliminate the value of the bomber wing. It does make the value we impute to the bomber wing vulnerable to changing views about how deterrence works. At first, the idea that value should depend on something as intangible as theories and views may seem unusual. But it is worth recalling that it is consumer's views about the value of given products that give any product its value. At any rate, the existence of the Bomber Wing has value in the short run to the extent that we believe its existence is reducing the probability of war: it makes our futures, our property, our children, and ultimately our values seem less vulnerable than they otherwise would.

A second aspect of the value which flows continuously from the existence of the Wing is the assurance that if deterrence fails, and we end up fighting a war, there is a reasonable chance that we could be successful because the bomber wing is, in fact, ready to fight. There is an insurance aspect to the existence of the bomber wing. We build and maintain the general capacity to fight just in case we have to use it. And, as a consequence of this investment, we sleep better at night and make investments in the future more confidently than we otherwise would. How much value is created in this way depends primarily on the real fighting capabilities of the unit. The more powerful and practiced it is, and the more effectively it is designed to achieve an important combat mission, the more valuable the wing. In this respect, the value created by the wing is much like the general capacity we maintain to immunize the population against health threats. There is some value associated with having an institution that is assessing threats, designing programs to deal with them, and being ready to deal with them even if the capacity is never used. And that value is created each day in the same way that life insurance policies produce value for those who buy them even if they never collect on the premiums. Indeed, in the case of life insurance, the tangible benefit of a cash payment to the buyer does not, by definition, ever occur until the buyer is unable to consume it. Yet, the policy clearly has value to the buyer.

Another aspect of the Bomber Wing worth noting is that its current value (which is rooted in its ready fighting strength and the assurances that offers to citizens about the amount of national security) is itself a function of extensive prior investments in

conditions. In producing this result, the agency must invest time in scanning the environment for wastes that are toxic, and in developing new technologies for reducing or eliminating the risks. They also must operate on current risks. There is uncertainty about the location and magnitude of the current risks that reduces the value of the enterprise. All this is similar to garbage collection, flu immunization, and so on.

What makes regulatory programs such as the toxic waste program different are two essential features. First, for most regulatory programs, the actual productive work (i.e., cleaning up old sites; reducing exposure in new areas where toxic wastes are being created) is carried out not by government employees, not by people who are under contract to the government, but instead by private companies. Second, government pursues the objective of controlling toxic wastes not only by spending its money to produce the effect, but also by obliging others to spend their resources to produce the result. In effect, government uses its authority to accomplish a productive purpose. This means that the ordinary transactions of government regulations agencies are not cleaning up toxic wastes, but instead in overseeing the efforts of others in pursuit of this objective. The "clients" of regulatory agencies, then, are not people who benefit from a service, but instead, people who are being urged to perform productive services on behalf of the public without compensation. It can be thought of as an extreme form of the obligations imposed on citizens as part of the garbage collection efforts, and perhaps even the obligations that were imposed on addicts as part of methadone maintenance programs. In each case, private citizens were being asked to change their behavior in ways that improved public conditions.

In thinking about value creation in regulatory programs, two features of the program become particularly salient that were missing in the analysis of the other programs. Both become salient because government authority to direct others is being used to produce value rather than government money. The first point is that the real resource costs of cleaning up toxic wastes are only partly reflected in government budgets. The government pays for assessing the risks, for improvements in the technology of clean-up, and for enforcing obligations. But much of the actual cost of cleaning-up is paid by private agencies. This means that the government might well overestimate the net value of the regulatory program simply because it fails to see the regulatory costs.

The second point is that in managing a regulatory program, an important performance attribute is how fairly the obligations to clean up are distributed. Two programs that were identical in terms of their clean-up performance but different in terms of the fairness with which burdens were imposed would be valued quite differently by the

was precisely this idea that provided the original justification for the AFDC program which is now the largest welfare program in the country.

The third way that welfare programs might create value is by offering a kind of insurance to everyone in the society - not just those who end up taking advantage of the program. The notion of the "social safety net" captures this aspect of welfare programs well. Just as the Bomber Wing offers assurances to everyone even if it is never used by anyone in particular, the existence of a welfare program reassures everyone that they will never have to starve to death or be homeless. Thus, the program has value as insurance against natural catastrophes for all of the population as well as being of direct service for clients.

A fourth way that welfare programs might be said to create value is by reflecting in the aggregate conditions of society a widely shared value that generosity is a virtue. The idea here is that individual citizens have preferences not only about their own lives, but also about the kind of society in which they would like to live. Sometimes those performances include a conception of society that is generous to individuals who are poor or unlucky. To the extent that a welfare program expressed these values, the program would create value for those who wanted a society in which these values were expressed. This point is distinct from the argument above because it implies that even if some citizens knew that they would never be clients of a welfare program, they might nonetheless gain value from its existence because it was part of a decent society - it was part of what made being a citizen of the society valuable in itself.

There are prices paid for producing these benefits. One is that the money used to support a welfare program is unavailable for other private or public purposes. In times when both private and public budgets are tight, and there are other urgent needs, this cost can be very high.

A second price is the administrative cost of transferring the money. One might think these would be small. But the fact of the matter is that in transferring the money we have some distinct aims which are costly to achieve. One is the desire to prevent people who are ineligible for the program from receiving benefits, and to insure that those who are entitled get what they deserve. Since the certification of eligibility and the calculation of benefits is a complex process that becomes even more complex as we reach for greater certainty in the judgments through verifications and frequent updating of information, we pay a large administrative price in managing the program. A second aim is to increase the chance that the money is being used well by client families. In the past, pursuit of this aim

relationship between outputs and outcomes, and confusion about who is the beneficiary, this program looks very much like methadone maintenance. In the way that the value of the program depends importantly on non-clients benefitting (or suffering) from the program according to their beliefs about what is good for the future of the society, the program resembles the bomber wing.

III. Problematic Aspects of Registering the Creation of Value in the Public Sector

Having examined a half dozen public sector programs from the perspective of value creation, one develops a healthy respect for the virtues of a revenue tied to the sale of a product as a powerful measure of value. It has at least five virtues. First, the revenue earned by selling a product is a fairly direct measure of the value of that product to the consumer who purchased it. Of course, the consumer may be deceived or confused about the product. But as the first approximation one can assume that the product was worth at least the price paid for it.

Second, because all products have selling prices, it becomes possible to compare the value of one product to another quite different product. Apples and oranges can be compared if they have different selling prices. It is much harder if we have to guess about their relative values without the benefit of a market price to help us.

Third, revenues earned by selling products can be compared directly to the costs of the resources used in producing them. If the revenues are greater than the costs (and if all "externalities" in the production process can be ignored), then we can be relatively sure that something of social value has been created. The product was sold at a price that covered the costs of production; and that price reflected the minimum value a consumer attached to having the product. Therefore, something of value was created.

Fourth, revenues are collected right at the boundary of the organization. A private firm discovers the value of its product at the moment it makes a sale. It does not have to wait and see whether the consumer makes good use of the products. Nor does it have to roam around asking consumers whether they liked the product in places and times removed from their basic transaction with the customer. The transaction at the boundary of the organization contains a great deal of information.

Fifth, there is a long tradition and an elaborate set of control measures that make it very likely that revenues will be accounted for accurately. Because a revenue is money, and because most accounting

some ways in which straight accounting data will be inadequate, and to show us where else we must look to discern whether value is being created.

A. Outputs v. Outcomes

One key problem in the public sector is that the activities that take place at the boundary of the public sector enterprise - e.g., the picking up of garbage, the administration of flu shots, the readiness of the bomber wing, the setting and enforcement of standards for toxic wastes - rarely create value in themselves. Typically, there is a causal chain that links these activities to things that have value in themselves. Often, we are uncertain about whether this causal chain really works or not. Typically we have a theory, but little actual data to validate the theory. In some instances, the data is potentially available - that is, it is possible to mount experiments and data collection efforts that can inform us about the effects of methadone maintenance programs on addicts - but the necessary experiments have not been done. In other cases, the data are not even theoretically available and we must operate forever with nothing more than theory to guide us.

In general, it has been the task of "program evaluation" to test the link between outputs and outcomes, or, more generally, to test our theories about how government activities affect the world. In practice, program evaluation has been somewhat disappointing in terms of its ability to show convincingly where public value is being created in politically powerful ways. Part of the difficulty is that we have tried to load too much weight on the analyses: we have tried to make them definitive when the best they could hope for is to be advisory. But another part of the difficulty has been that we did too few of them. In general, measurements gain in power as they are replicated, and as they are compared with one another. Typically, program evaluations are in single shots - with one program being evaluated at one moment in time. This was useful. But it was not surprising that the isolated studies had much less political and managerial significance than a steady accumulation of studies within and across government programs. A third part of the difficulty was that often the methodology of the studies was badly flawed. There were major problems with measurement of outcomes, and with the creation of control groups or other forms of planned variation. But perhaps the greatest methodological problem was in the measurement of the outputs - that is, in determining how the government's program was really operating. For the most part, we assumed that a new policy or program was, in fact, implemented, and then arranged to observe whether any important effects occurred. But what most implementation research now tells us is that most new policies and programs are not, in fact, implemented. As a result, many of our evaluation studies are

of its programs acquires even more significance than the necessity of discounting the value of a program by virtue of the uncertainty over its benefits. In this view, it is simply wrong for government to expose its citizens to risk undertakings. The government must be certain that it is creating something of value when it acts or it shouldn't act at all. This idea springs from an all too easy to understand human desire for certainty, combined with a special view of government as a solid, responsible institution. BUT if the idea were rigidly applied, the government would go out of many businesses it is now in - including defense programs as well as social programs - and innovation would cease in the programs it continued to operate. For the fact of the matter is that mostly we do not know for sure exactly what the government is producing. We are always betting the money and activity of the government in somewhat uncertain outcomes.

Two observations might make this idea easier to absorb. One is simply that to say we are uncertain about the results of government programs is not the same as saying we know nothing about them. We may know that some effects are much more likely than others; and that some alternative actions are clearly worse than to ones we are now pursuing. The point is simply that we do not generally know exactly what will happen until we try something. The second is that this uncertainty is true for private sector operations as well. When the private sector designs a new product, or invents a new technology for producing a product, they do not know exactly what will happen. The product might or might not sell. The new machinery might or might not work. They would not take the risk if they thought the chances of the new product and technology succeeding were low. But at the outset, they do not know for sure what will happen.

At any rate, any effort to assess public sector value creation must be able to accommodate uncertainty about the value of the product, and account for it accurately rather than assume that any uncertainty means that the program is valueless or irresponsible of the government to mount.

C. Bad Consequences and Failures as Well as Successes

Because the effects of government programs radiate broadly throughout the society, there may be some harmful effects as well as beneficial effects. When an immunization program is launched, people will get ill as well as be immunized. When a methadone program is launched, some addicts will die of methadone programs as well as be cured. When a toxic waste program is launched, companies and their investors will absorb economic losses as well as some reduction in exposure to toxic wastes achieved. These bad effects must be accounted for as costs of the program. Like the costs of the resources used in mounting the programs, and like uncertainty about

D. Non-Client Beneficiaries

As we have seen, government programs produce benefits (and costs) among people who are not clients (or targets) of the program. In the case of garbage collection and flu immunization, this production occurs partly because the existence of the general program increases the productive value of individual efforts directed towards the same goal: the same amount of rodent control efforts by a single family have a much different value in terms of controlling the presence of rats in a neighborhood where garbage is generally kept under control than it would in a neighborhood where the garbage was less under control; the same amount of private precautions against exposure to the flu would have different value in a world where no one was immunized than they would in a world where many people were immunized. But another part of the value comes not in the realm of material production, but in the realm of preferences and value. Some levels of untidiness may be so small as to be treated as insignificant by residents or visitors to a community. At some point, however, a level of untidiness may tip not only into significance, but in fact become the dominant impression of a community. In effect, there may be discontinuities in our preferences as well as in the process of production. Regardless of whether the value is created by production, or by the intersection of production with the values and preferences of people, these values are created by the experience of people who are not necessarily clients of the program; or, more precisely, who might be clients of the program but also have a different, more indirect relationship to the program as well.

The impact of a program on non-clients is even more obvious in the examples of methadone maintenance, the bomber wing, and the toxic waste program. Even though methadone programs have obvious clients, and even though one can argue that the clients are important beneficiaries of the programs, one can also argue that the most important and most certain short-run beneficiaries of the program are not the clients but the society at large that receives the benefit of decreased crime and victimization. Similarly, in the case of the toxic waste programs, one can hardly argue that the beneficiaries of the program are the citizens who interact with it directly. They are the targets of the program, the inheritors of annoying and costly burdens. If there are any beneficiaries of the program, they are the citizens at large who benefit from having a safer and more aesthetically pleasing environment than they otherwise would. Of course, to the extent that the regulatory program imposed very heavy costs on the society for minimal benefits, or to the extent that the costs were distributed arbitrarily and capriciously, the existence of the program would produce losses to people outside the program as well as benefits. But the point is that the losses and benefits accrue among people who are not the clients or targets of the program. As a

The discussion of the non-client beneficiaries (and losers) of the welfare program highlight another important feature of value creation in the public sector that is easily forgotten, and once identified, quite hard to handle. That feature is the role that perceptions, beliefs, theories and values hold in determining whether, how, and where value is created in the public sector. One can see the role of perceptions and beliefs quite clearly in programs such as the immunization program, the bomber wing, and the welfare program. But it might be worth distinguishing several different kinds of perceptions, beliefs and values.

One crucial distinction is between what might be thought of as empirical beliefs about how the world operates on the one hand, and judgments about the value or worth of commodities, services or conditions on the other. Now, this distinction is much less clear than most people would like to make it. Many things acquire worth and value according to how they are used, and their value in use depends a great deal on our empirical knowledge and belief. An instrument well designed for its purpose, or a society designed in accord with an accurate and perceptive view of human nature provide a kind of aesthetic pleasure as well as celebrate our empirical knowledge. Still, at lower levels of abstraction, it is handy to make the distinctions between our knowledge about how the world operates in relevant areas of interest, and our preferences for one state of the world over another.

In the case of immunization programs, methadone maintenance programs, and the bomber wing, for example, the value of the programs is complicated by empirical uncertainty about their effects, or their value in use. There may or may not be a significant flu threat. Methadone might or might not reduce crime. Bomber wings probably increase the chance that we could win a war, and reduce the probability that we will have one, but they might also increase the probability that a war would start. To a great extent, then, we are betting on these programs, and their current value to us includes this uncertainty. But this uncertainty can be influenced by new information. A new fact might become available, or a flaw in our reasoning might be exposed. When this happens, the current value of the program changes. If the new piece of information is powerful and favorable to the prospects of the program, then the value of the program will increase. If the piece of information is powerful and unfavorable, or so contrary to our original understandings of how the program was supposed to work, then the value of the program would go down because we would have learned that the benefits of the program were likely to be less than originally imagined, or more uncertain. In either case, the new finding by itself would reduce the value of the program.

some people want to keep us very safe from chemical wastes and the threat of nuclear war; others are more willing to run risks in these dimensions for increased economic growth. So, there are preferences that attach to aggregate conditions in the society as well as to individual circumstances. It is these that are debated and expressed through politics - including the value of how responsive the society should be to the natural desire of some of its members to want their views about the best sort of society to be reflected in governmental actions. When actions are necessarily public - when we formulate a budget for spending the tax revenues we have raised, when we vote for a party or a president, when we decide who should bear the cost of controlling pollution or fighting foreign wars - we are necessarily guided by preferences about the society at large as well as preferences for ourselves and our intimates. And it is in terms of these preferences that the value of welfare programs, and defense programs, and toxic waste programs register as well as our preferences for ourselves and our friends.

It is also worth noting that just as empirical beliefs can change over time, the preferences that individuals have for themselves and for the society can also change. Preferences for leisure and hot-tubs might systematically grow strong relative to preferences for work and hay-rides. Similarly, preferences for a militarily strong society might advance against preferences for a generous society. It might even be that preferences about our understandings of relatedness and mutual responsibility might change; we might change from a society of people who felt obligated to no one, to one that felt responsible for family, to one that felt responsible for ethnic groups, to one that felt responsible to disadvantaged citizens, and so on. Indeed, when we make statements such as "the society is becoming more conservative" we are making a statement about the distribution of preferences in the society about aggregate social conditions. To a degree, we can think of these changes in preferences as internally generated by autonomous individuals responding to their experience. But one might just as well think of this process of changing preferences as arising from socially shared experiences that are interpreted for the citizens by politicians and leaders. Indeed, what political parties and political leadership are about are efforts to collect individual views about individual and social experience and give them expression in ideologies, policies and programs. It is not surprising, then, that policies and programs would be valued differently by different political parties. It is not simply empirical differences that divide them, but also matters of social values. Thus, different political parties looking at the same empirical reality might value methadone maintenance programs, toxic waste programs, bombers, and welfare programs quite differently.

F. Authority as a Resource

individual rights are not violated. So, the citizens, their representatives and their advocates in court determine how much authority is available to the government for pursuing the society's purposes.

The pervasive role of authority in creating value in the public sector is even more apparent when we realize that a large fraction of the money available to government is raised through the use of authority. Of course, in areas such as mass transportation and the use of the public lands, government programs sometimes earn revenues by selling goods and services. Moreover, as political movements to limit the government's capacity to levy taxes gain power, interest in the potential of "users fees" throughout the government increases. But despite these trends, it remains true that by far the largest source of government revenues come from general programs of taxation. So even when the government is using money to accomplish purposes, it is also relying on authority, for it was the state's authority that allowed the collection of the money.

In sum, then, the state uses its authority as well as its money to create value. But like capital in the private sector, the authority is only loaned to the government; it is not given. Moreover, it is lent on rather stringent terms. The purposes for which it may be used are limited. How it can be invoked against individuals is tightly circumscribed with many rights of appeal. And at any given moment, the authority may be withdrawn if the problem which justified its use disappears, or if the authority is abused. Thus, in pursuing public purposes and in creating public value, public managers must husband their use of authority just as they husband their expenditures. While it is available for use, it is better to use less of it rather than more, and to use it judiciously rather than recklessly.

G. Producing Readiness

The discussion of the flu immunization program, the bomber wing, and the toxic waste program highlighted a seventh important aspect of creating value in the public sector; namely, the fact that the public sector produces "readiness" as often as it produces goods or services that are actually consumed. This is most obvious in the case of the bomber wing; its principal value is in its readiness to fly rather than in its actual flying. This would have been equally evident if we had examined a fire department with its trucks waiting in its station houses, or a police department with its cars ready to respond to calls for service, or the Coast Guard's program for search and rescue. The feature of these programs that make their production of readiness so obvious is that one can go and see large numbers of people and equipment continually engaged in the task of being ready, and spending