

**WORKING PAPER**

***CAPITAL CONCEPTS AS INSIGHTS INTO NEGLECT  
OF PUBLIC INFRASTRUCTURE***

**John Brätland  
U.S. Department of the Interior**

**July 3, 2009**

**Running Head**

**CAPITAL CONCEPTS AS INSIGHTS**

**Address correspondence to**

**John Brätland, Ph.D.  
U.S. Department of the Interior  
1849 C Street N.W., Mail Stop 4230  
Washington, D.C. 20240**

**[john.bratland@MMS.gov](mailto:john.bratland@MMS.gov)**

**Phone # (202) 208-3979  
Fax # (202) 219-5565**

## **ABSTRACT**

Is neglect of public infrastructure inherent in governmental provision? Two concepts of 'capital' prompt a 'yes' to this question. The first is a misleading labeling of public infrastructure as 'public capital.' Were this labeling apt, maintenance of infrastructure would be demonstrably analogous to maintenance of private capital. Private-capital maintenance aims at maintenance of income, implying that maintenance of a 'public capital' must aspire to maintain 'aggregate social benefits.' But without clear ownership, public infrastructure generates no appropriable revenue that would serve as calculational guide to maintenance. The second 'capital concept' instrumental in infrastructure neglect is the maintenance of 'political and bureaucratic capital' by public officials. This maintenance involves personal time-structured strategies to maintain power, control and self-defined advantage. Maintenance of this metaphorical capital by officials is likely to distract from maintenance of public infrastructure. The paper strongly argues that maintenance requires private provision of these facilities.

# *CAPITAL CONCEPTS AS INSIGHTS INTO NEGLECT OF PUBLIC INFRASTRUCTURE*

JOHN BRÄTLAND<sup>1</sup>

## I. INTRODUCTION

The focus of this paper is the economics of failing to maintain the components of such ‘public capital’ *once it is in existence*. Unlike private infrastructure of entrepreneurial enterprises, public infrastructure is ostensibly and routinely neglected. Evidence of neglect is apparent and easily highlighted, for example, by noting the condition of bridges in the United States. Prior to the 2007 bridge collapse in Minneapolis, Minnesota, the National Transportation Safety Board reported that “one-quarter of all bridges in the U.S. are considered structurally deficient, and 80,000 bridges across the country need some sort of reconstruction or rebuilding.”<sup>2</sup> The Minneapolis incident and earlier infrastructure failures have triggered a sense of public unease over the state of *existing* publicly financed facilities. This concern was heightened by the flooding of New Orleans which was apparently a consequence of failures to maintain levees and flood walls. This pattern seems to suggest a systemic neglect of existing public infrastructure including roads, bridges, water mains, sewage systems, streets and dams.

How should this pattern be interpreted? What lessons should be gleaned from these and other examples of ‘apparent infrastructure neglect’? In his recent book, *Bold Endeavors*, Felix Rohatyn advances his own answers:

These tragedies, however, are only harbingers of many national disasters that are to come. ... America needs to rebuild its infrastructure. It is a critical national priority, a costly long-term investment, and a visionary enterprise. ... the federal government has traditionally been the indispensable investor in our nation, ... this book is an appeal that we treat the renewal of our infrastructure as a necessary federal capital investment ....<sup>3</sup>

Is Rohatyn right? Or is the neglect inherent in the very fact of public provision of what is thought of as ‘public infrastructure’? Is there an inherent inevitability to the neglect of public infrastructure that is endemic to its governmental provision and management? The answer to both questions is ‘yes.’ This paper will explore reasons for infrastructure neglect with reference to two essentially metaphorical concepts of ‘capital.’ A prevailing but misleading capital concept is a presumption that public infrastructure can be viewed as ‘public capital.’ But a

---

<sup>1</sup> John Brätland is a senior economist with the U.S. Department of the Interior in Washington, D.C.

<sup>2</sup> CBS News Report, Daniel Aven. “Bridge Collapse Not An Isolated Incident,” August 7, 2007.

<sup>3</sup> Felix Rohatyn. 2009. *Bold Endeavors: How Our Government Built America and Why It Must Rebuild Now*. New York, NY: Simon and Schuster, Inc., pp. 1-5

second capital concept refers to the phenomenon of public officials acting to enhance ‘political and bureaucratic capital’ as represented by their own personal career objectives. In other words, careers, as such, become a type of metaphorical capital in the plans and actions of public officials.

The assumption that public infrastructure should be viewed as a form of ‘public capital’ is demonstrably false. The legitimate concept of capital implies the ability of the entrepreneur to manage a *combination of resources* with the intent of earning a income for an *enterprise as whole*. Private property and monetary exchange afford the entrepreneur this ability. Hence, the aptness of the label, ‘public capital,’ hinges on the extent to which public infrastructure can be managed in a way that is functionally analogous to the management of private capital. Capital maintenance is about the way in which individual entrepreneurial enterprises manage a combination of capital goods for the purpose of maintaining the enterprises’ expected income. But what would be the counterpart of enterprise income for government in reckoning requisite maintenance of public infrastructure? Tax receipts are divorced from incremental use and, hence, cannot be a candidate.<sup>4</sup> Functionally, the income counterpart would be the total benefits yielded by the all existing elements of infrastructure *as a totality*. The problem arises from the virtually non-existent ownership of public infrastructure and the fact that the benefits of infrastructure yield no appropriable sales revenue that would serve as guide to maintenance. Hence, neglect is inherent in the fact of government provision. Labeling components of infrastructure ‘public capital’ is a metaphor that misleads public into thinking public infrastructure can be successfully maintained.

Next, the paper addresses the ‘legislative and bureaucratic capital’ manifested in the time structure of ‘personal career strategies’ of elected and appointed officials. Various forms of self-defined, time-structured strategies on the part of elected and appointed public officials can be expected to thwart what some may view as a more ‘rational maintenance’ of infrastructure facilities. Career, whether focused on selfish or humanitarian aspirations, becomes the metaphorical capital to be maintained by public officials as they deploy the means (metaphorical capital goods) at their disposal. Action undertaken to maintain ‘political and bureaucratic capital’ may, in some instances, mean that neglect of public infrastructure is a rational course of action on the part of officials bearing direct or indirect responsibility for maintenance. In other words, the time-stream of public benefits that could be yielded by infrastructure maintenance will not be the principal motivational factors for officials responsible for budget formulation and the allocation of outlays.

A long-standing economic folklore has inculcated the idea that the services of public infrastructure are ‘public goods’ that must be provided by government. But this notion is a failed mythology; to the extent that public goods exist, the possibility of their private provision has not

---

<sup>4</sup> Fred Foldvary notes that “An alternative system is fiscal equivalence, paying for what you get. ... funding their public services from rents and user fees rather than taxing improvements and productive efforts” (Fred Foldvary 1993. *Public goods and Private Communities: The Market Provision of Social Services*. Brookfield Vermont: Edward Elgar Publishing Company, p. 197). Foldvary explains that “user fees are paid in direct exchange for receiving a service rather than imposing an excise tax on the purchase of goods or on an activity” Ibid., p. 202. However, user fees are also problematic in terms of their capacity to provide a guide to infrastructure maintenance. This issue is addressed below.

only been ably argued but well documented.<sup>5</sup> The paper concludes with the observation that private provision would also solve the problem of public infrastructure neglect would also be solved by greater reliance on private property rights and entrepreneurial initiatives in the provision of demanded services.

## II. PRIVATE VERSES PUBLIC INFRASTRUCTURE MAINTENANCE

As noted above, neglect of public infrastructure can be better understood by comparing the process by which private capital is maintained and the process that characterizes maintenance of ‘public capital.’ Is the process by which public infrastructure is maintained analogous to actions undertaken by private entrepreneurs to maintain capital? Government as an ‘actor’ is confronted with the task of maintaining what is presumed to be ‘public capital’ embodied in the countless disparate components of infrastructure ranging from schools to sewage systems. Assume that the government is simply an analogue of the ‘entrepreneur’ implementing a plan for the use of infrastructure facilities and their maintenance. In viewing the government in this way, one can treat the components of public infrastructure as counterparts of the capital goods deployed by entrepreneurs in the implementation of business plans. The ‘net social benefits’ of governmental maintenance of infrastructure *during a time period* would be analogous to the desired level of income sought by the entrepreneur through investment in capital maintenance. In essence, the entrepreneur invests in the maintenance of capital to obtain a desired time-stream of income. The central question is: can a government do the same?

### A. Capital calculation in private-infrastructure maintenance for the firm

An important insight into public infrastructure maintenance can be gleaned from the process by which entrepreneurial infrastructure is maintained by the business firm. In this section, some pains are undertaken to outline the precise nature of the process by which private entrepreneurial infrastructure is maintained. The purpose is to draw a sharp contrast to the task facing governments in maintaining public infrastructure. The action of maintaining private infrastructure is driven by entrepreneurial efforts to earn an economic return on the investment undertaken to sustain the productivity of the resources at the entrepreneur’s disposal. But for the entrepreneur, investment in maintenance is not necessarily focused on particular resources; rather investment is aimed at the way in which the entire complementary combination of resources contributes to enterprise’s profitability. Given the realities of uncertainty and the number of resources involved, how can the entrepreneur undertake such investments with any realistic prospect of success? Private property and monetary exchange mean that the entrepreneur is able to use market prices in discerning the prospective profitability of maintaining a particular

---

<sup>5</sup> Analysts call attention to evidence that the services of public infrastructure can be provided through private entrepreneurial undertakings. See: William Niskanen. 1971. *Bureaucracy and Representative Government*. Aldine-Atherton Press: Chicago, Illinois; Hans-Hermann Hoppe. 2006 [1993]. *The Economics and Ethics of Private Property: Studies in Political Economy and Philosophy*. Auburn, Alabama: The Ludwig von Mises Institute, p. 7; Murray Rothbard. 2004. *Man, Economy and State with Power and Market*, The Scholar’s Edition. Auburn, Alabama: The Ludwig von Mises Institute, pp. 1029-1041; Jarret B. Wollstein. 1974. *Public Services Under Laissez Faire*. New York, NY: Arno Press; Walter Block. 2009. *The Privatization of Roads and Highways*. Auburn, Alabama: The Ludwig von Mises Institute, p.232; and Foldvary, 1994, pp. 1-15.

combination of resources to produce and sell a specific combination of goods and services.

The fact that all exchange is conducted in monetary terms means that both resources employed and the goods produced have quotable, observable market price. These monetary prices are reliable indicators of scarcity which means that prices for resources and goods produced goods afford the entrepreneur the ability to subjectively judge the prospective opportunity costs associated with alternative employments of these goods and alternative schedules of maintenance made necessary by these chosen uses. Hence, the institutions of private property and monetary exchange make it possible for the business entrepreneur to implement plans aimed at the attainment of the highest return from the particular combination of resources at the firm's disposal. More to the point, the entrepreneur can begin to assess and compare the prospective net monetary profitability associated with alternative plans of action. This ability is referred to as 'economic calculation.'<sup>6</sup>

The resources under the business entrepreneur's disposal are 'capital goods.' Capital goods may take the form of "... pieces of land, buildings, equipment, tools, goods of any kind and order, claims, receivables, cash or what ever."<sup>7</sup> In the investment actions of private individuals, the focused, goal-oriented inter-linkage of capital goods can be seen as the principal manifestation of private infrastructure. Capital goods come into existence only through acts of saving in which the individual attempts implement their own plans to better provide for the future. These actions involve the forsaking of immediate consumption to reap a desired current and future income. But capital goods do not in themselves constitute capital. But the existence of these capital goods does not assure income or imply anything with respect to maintenance. These things only become an aspect of capital when they are owned, deployed and maintained in the coherent pursuit of a single, unified plan undertaken by a specific economic enterprise. The enterprise itself is the organizational manifestation of the entrepreneurial plan itself and could not be made to come into existence without economic calculation.<sup>8</sup> As the focus of a plan, capital reflects entrepreneurial enterprise's judgments regarding the most profitable use of the capital goods.

Economic calculation also permits the business entrepreneur to make certain distinctions and connections in undertaking action. For example, the entrepreneur is able to make the critical distinction between 'capital goods' and 'capital.' Capital goods become the things, objects or resources that are owned or controlled by the entrepreneur and which are necessary for the implementation of his plan. Capital, on the other hand, emerges as the entrepreneur's reckoning of the net worth of his own plan to employ the capital goods that he controls. In affirming the

---

<sup>6</sup> Ludwig von Mises has observed that the task of economic calculation "is to adjust his actions as well as possible to his present opinion concerning want satisfaction in the future" Ludwig von Mises. [1949] 1998. *Human Action: The Scholar's Edition*. Auburn, Alabama: The Ludwig von Mises Institute, p. 232. Elsewhere Mises also notes: "[t]he question it answers is whether a certain course of conduct increases or decreases the productivity of our future exertions" Ibid., p. 511.

<sup>7</sup> Ibid., p. 262.

<sup>8</sup> Peter Lewin. 1999. *Capital in Disequilibrium: The Role of Capital in a Changing World*. London: UK: Routledge, pp. 160-166.

distinction between ‘capital’ and ‘capital goods,’ Mises also acknowledges that without the entrepreneurial plan, the things that would otherwise be capital goods are not even capital goods. To be capital goods, these things must be part of a plan in the mind of the entrepreneur.

However, economic calculation means that the entrepreneur is also able to render a judgment regarding the distinction between capital and income. Income is a way of looking at capital in terms of its return as it may be judged over the entrepreneur’s planning horizon for the use of the capital goods at his disposal. Capital, as a judgment of net present worth, is a way of looking at the totality of future income from the point of view of the entrepreneur’s reaction to market uncertainty and time preference or rate of discount. Income becomes that amount which can be consumed within a definite period without lowering the expected investment worth of capital as reckoned by the entrepreneur.<sup>9</sup> Hence, capital and income are entrepreneurial judgments regarding the ‘most profitable’ use of all of the capital goods employed in the plan. Capital becomes the entrepreneur’s appraisal of the enterprise’s net present worth in pursuing such a plan. Income is the entrepreneur’s conjecture of the increase in net worth from implementation of the plan. The entrepreneur’s plan is made possible by secure rights of private property and the existence of monetary exchange.

Within this calculational context, the entrepreneur is able to face uncertainty and make rational choices required to maintain capital. Actions undertaken to maintain capital are fundamentally speculative undertakings to maintain a desired time-stream of future income. For the entrepreneur, investment in the maintenance of capital, as distinct from maintenance of capital goods, is a way of protecting the prospects of a desired level of future income for the enterprise as a whole. Depreciation or user cost must ultimately be based on the entrepreneur’s understanding of how he may most profitably employ a chosen combination of capital goods in uncertain future markets. No maintenance of capital goods is ever undertaken by the enterprise in the absence of an entrepreneurial plan focused on the desired level of future profitability of the *entire* enterprise.

Depreciation must always be judged within the context of the respective complementarities between the respective capital goods. Hence, depreciation necessarily addresses the role of the capital good within the totality of an individual entrepreneurial enterprise. A maintenance decision is never focused necessarily on ‘wear and tear’ sustained by particular capital goods as such. Rather, focus must always be on the effectiveness of the capital good in serving requisite complementary function of attaining the desired level of current and future profitability. In other words, a reckoning of maintenance is always focused on the prospective profitability of the particular complementary combination of capital goods. Hence, each maintenance decision is about the most profitable complementarity thought to be possible by a combination of capital goods to be employed in pursuing an entrepreneurial plan.<sup>10</sup> As Mises asserts:

---

<sup>9</sup> Mises, *Human Action*, p. 261.

<sup>10</sup> Ludwig Lachmann. 1986. *The Market as an Economic Process*. Oxford, U.K.: Basil Blackwell Ltd., p. 63. Another important paper on this topic is by Hayek. See: F.A. Hayek. 1941. “Maintaining Capital Intact: A Reply.” *Economica*, Volume 8 (1941), pp. 276-280.

If the entrepreneur has employed factors of production in such a way that the money equivalent of the products at least equals the money equivalent of the factors expended, he is in a position to replace the capital goods expended by new capital goods the money equivalent of which equals the money equivalent of those expended. But the employment of the gross proceeds, their allotment to the maintenance of capital, consumption, and the accumulation of new capital is always the outcome of purposive action ... it is by necessity the result of deliberate action. And it can be frustrated if the computation on which it is based was vitiated by negligence, error, or misjudgment of future conditions.<sup>11</sup>

In a realistic setting, the issue of capital maintenance takes on a subjective character as the entrepreneur grapples with uncertainty and change. Market uncertainty and change mean that depreciation for the entrepreneurial enterprise is never an objectively measurable phenomenon.<sup>12</sup> Rather, it is a matter of entrepreneurial judgment with respect to the way in which future capitalized income is affected by conjectured depreciation. Depreciation must involve a judgment of the efficacy of capital-good combinations in achieving inter-temporal goals sought in the entrepreneurial plan.

The maintenance of private capital under conditions affording economic calculation has the following *implicitly interrelated* features:<sup>13</sup>

- Prospective benefits of maintenance as reflected in expected future monetary income is appropriable by the enterprise undertaking maintenance (that is costs and benefits are borne by the same entity).
- Actors (entrepreneurs) are able to make rational speculative judgments of the anticipated, yet uncertain, monetary tradeoffs between current investments in maintenance and the future income return.
- Private property and monetary exchange mean the entrepreneur is able to integrate plans for the maintenance of all capital goods into a comprehensive business plan focused on the maintenance of future income.
- Physical deterioration of particular capital goods is addressed by the entrepreneur only to the extent it is judged to ‘depreciate’ the present value of future monetary income yielded by *all the capital goods as an integrated, complementary combination*.
- The business entrepreneur is able to make a rational ranking of maintenance

---

<sup>11</sup> Mises, *Human Action*, p. 512.

<sup>12</sup> Lachmann, *The Market as an Economic Process*, pp. 66-67.

<sup>13</sup> For the purpose of this discussion, these features are listed here as “separate and distinct” even though each may necessarily imply any of the others.

priorities depending upon the extent to which combined or total revenue productivity of *all the capital goods as a complementary combination is affected*.

- *Maintenance plans for particular capital goods are unique to the individual entrepreneurial enterprise*, reflecting the enterprise's own market expectations and the particular complementarities sought in its chosen capital-good combinations.
- Since maintenance undertaken by the firm is tied to maintenance of income, the firm is able to focus its maintenance investments on the demand for its products as expressed by its customers.<sup>14</sup>

These abilities afforded the business enterprise by economic calculation are of particular importance in light of the fact that the maintenance of private capital is undertaken to maintain income under conditions of future market uncertainty. For the entrepreneur, both opportunity cost of maintenance and prospective income to be sustained can be subjectively reckoned in monetary terms. Even though these judgments are fundamentally speculative in nature, they can be made, in monetary terms, with a degree of 'rationality' that would be impossible in the absence of private property and monetary exchange. This rationality is the principle reason that private capital is maintained and not neglected.

However, successful maintenance of private infrastructure can only be reckoned in the context of individual entrepreneurial plans for an entire enterprise. Subjective reckonings of what investments constitute capital maintenance are established by the entrepreneur within the context of his plan. Acknowledgement that all markets are necessarily in disequilibrium at any instant in time and that each actor faces uncertainty means that any reckoning of capital maintenance is personal, entrepreneurial and essentially speculative.<sup>15</sup> *Capital maintenance is necessarily undertaken by individual entrepreneurs acting on their own behalf -- not by society as a whole*. Individual appraisals of required maintenance are based on the entrepreneur's individual plan for maintaining profitability under conditions of uncertainty and market change. In other words, the extent to which economic maintenance of private infrastructure has occurred is not amenable to empirical 'measurement' by outside observers.

## **B. 'Public capital': a misleading label in the context of maintenance**

Metaphors are commonly thought to provide a framework for new insights and, as such, their use is generally applauded. But, metaphors also become a form of labeling which in itself can be misleading. One can ask the question: is the term 'public capital' as applied to public infrastructure metaphorical or is it to be taken as literal reference? If one acknowledges that the

---

<sup>14</sup> Ibid., pp. 67-71.

<sup>15</sup> Ibid., p. 67. See also: Israel Kirzner. 1996. *Essays on Capital and Interest: An Austrian Perspective*. Cheltenham, UK: Edward Elgar Publishing Company, p. 103.

term is metaphorical, one must then ask: is the metaphor apt in light of the process of ‘public capital maintenance’? The following discussion is focused on answering this question.

Having made the financial outlay for the facilities that comprise public infrastructure, government takes on the responsibility of maintaining public infrastructure. Assume that the government is an acting, unitary entity making maintenance decisions with the intent of ‘maintaining total public benefits.’ The adjective ‘unitary’ is used here simply to mean that the government’s plans are formulated and undertaken as though prompted by one mind. In other words, the assumption is made that the government *is not* comprised of individual bureaucrats and legislators with self-seeking but frequently conflicting aspirations. Rather, the government is assumed to act in a unified way to maintain public infrastructure on the basis of *some attempted imputation of the net benefits that accrue to the public.*<sup>16</sup> The emphasis on maintaining net public benefits is critically important because it represents *the only* legitimate analogue of the entrepreneur’s income.

If government is to maintain ‘public capital’ it must be able to somehow impute a surplus of total benefits yielded by this aggregated ‘capital stock’ above some type of reckoning of opportunity costs. Some type of capital calculation must be employed. As ‘public capital’, the components of public infrastructure are seen as publicly owned ‘capital goods’ that presumably yield benefits over some finite period extending into the future. The period over which benefits are forthcoming is necessarily finite because ‘tangible assets’ depreciate and require maintenance if employed for a particular purpose. But can the maintenance of physical public infrastructure as a process be viewed as analogous to the actions taken by an entrepreneurial firm to maintain income?

As noted above, the foundations of economic calculation are secure property rights and monetary exchange for all goods including capital goods. But the role that these two conditions play in the planning and execution of maintenance of the public infrastructure is limited or nonexistent. Moreover, the services of public infrastructure are, in general, not marketed. Hence, the problem encountered by government in maintaining public infrastructure, is that benefits to the public are not embodied in a calculational stream of monetized revenue from those members of the public availing themselves of the services of infrastructure.<sup>17</sup> While in some narrow instances, tolls can be collected for marginal use, the problem of imputing maintenance tradeoffs for all components of public infrastructure still remains. Hence, a unified revenue stream from the services of all public infrastructure facilities does not accrue in a manner that affords maintenance of the various facilities on the basis of benefits yielded. The prospective benefits of maintenance cannot be reflected in a comprehensive and appropriate future monetary income meaning that

---

<sup>16</sup> This assumption is only made for purposes of discussion and not with the intent of defending its legitimacy or feasibility. The assumption represents what Ludwig von Mises refers to as ‘hypostatization. He notes: “The worst enemy of clear thinking is the propensity to hypostatize, i.e., to ascribe substance or real existence to mental constructs or concepts. ... Only individuals act.” See: Ludwig von Mises. 2006 [1962]. *The Ultimate Foundation of Economic Science*. Auburn, Alabama: The Ludwig von Mises Institute, pp. 70-71.

<sup>17</sup> Again, it would appear that the problem of the monetized revenue stream is allayed, in part, the extent that user fees for actual use of infrastructure services can be collected. This issue is addressed at greater length below.

the government is left without a guide in planning maintenance expenditures for the disparate facilities under its purview. In other words, the government is unable to ‘calculate’ the anticipated, yet uncertain tradeoffs between current expenditures for maintenance and the *comprehensive future benefits to the public* maintained as a consequence of these outlays.

*In attempting to maintain public infrastructure, the government has nothing comparable to the entrepreneur’s income that provides a calculational means of dealing with the reality that each maintenance project is in actual or potential competition with every other maintenance project.* How are these to be ranked in economic sense? The government is confronted with only relative physical deterioration as a guide in choosing between repair of highways and the renovation of a public school, for example. A calculational comparison of the relative benefits of either project is not possible. Without an integrated revenue stream generated from public use of all infrastructure facilities, the government has no means of reckoning a rational tradeoff between maintenance projects facilities. With only physical indicators of ‘depreciation,’ the government is faced a position of only undertaking maintenance when physical neglect becomes apparent. By implication, the government has no rational means by which anyone could possibly rank maintenance projects in the terms their respective benefits to the public.

There is a ‘disconnect’ between marginal intended use of infrastructure by the public and any planned maintenance that may be considered by the government. In the case of the entrepreneurial enterprise, intended use of a capital good and the maintenance of the capital are integrated in one plan. In other words, no decision with respect to use is made without taking projected maintenance into account. However, the calculational fulcrum on which these marginal tradeoffs are balanced is the maintenance of total future enterprise income. However, the users of public infrastructure obviously pay no heed to the requisite maintenance that may arise from their marginal use. In the case of individual facilities in public infrastructure, users and the government as the ‘maintainer’ are necessarily different acting entities. *There is virtually no calculational linkage between the decisions to use and the decisions to maintain.* Hence, the action of using and the action of maintaining necessarily impose some sort of ‘unmeasurable externality’ on others. Neglect of public infrastructure is the logical consequence of these externalities. The following inferences highlight the misleading nature of the ‘public capital’ label:

- No rational means are available to bureaucrats in assess the relative benefits or opportunity costs of allocating budgets between expenditure of resources on new infrastructure as opposed to maintenance of existing infrastructure.
- Prospective benefits of infrastructure maintenance are not, in general, appropriable by those bearing the economic burden of maintenance; no mechanism or process is available to facilitate exchange between these groups incurring differential benefits and opportunity costs.
- Means are unavailable to assess the uncertain and changing tradeoffs between increments to *total* financial government outlays on infrastructure maintenance and increments to total future benefits derived from such

maintenance.

- Means are unavailable to government decision makers in reckoning the *relative* tradeoffs between maintenance of some facilities of public infrastructure as opposed to maintenance of other facilities.
- Maintenance decisions for public infrastructure are based solely of physical deterioration without any rational reckoning of benefits or opportunity costs involved with the result that some facilities are neglected that should be maintained while other facilities that should be abandoned are maintained.

Clearly cost-benefit analysis provides no solution to this problem.<sup>18</sup> But one may be tempted to assert that a solution is offered by the collection of user fees for the services of public infrastructure. In the case of certain facilities such as those used in transportation, fees can be collected for incremental uses by the public. User fees would provide a monetized income stream that could be appropriated for maintenance purposes. However, would the government be able to use this income stream as ‘feedback information’ in judging the extent of the maintenance required to maintain the social benefits yielded by these facilities? Would a failure on the part of government to maintain such facilities necessarily be reflected in declining future income from user-fee collection? Could an ‘appropriate’ user fee be collected that would provide sufficient revenue for the longer-term replacement of facilities? For reasons already discussed, it is unlikely that one could honestly answer ‘yes’ to the first two questions. But in light of the fact that the government can always charge high user fees, the answer to the third question is probably ‘yes.’ But again, the critical issue is the fact that even with the collection of user fees, physical deterioration of facilities rather than income maintenance would be the principal feedback process inducing the government to undertake maintenance. That is, with respect to the particular affected facilities, *no calculational means would be available to determine the level of the fee.*

Moreover, other facilities in the public infrastructure presumably yield services for which no user fee can be collected. However, if neglect of particular facilities in public infrastructure is to be avoided, maintenance by the government must be integrated and comprehensive. The best use of maintenance resources would need to be based on some revealed need that addressed the relative benefits of maintenance for *all* facilities of public infrastructure.<sup>19</sup> Put differently, some means would need to exist by which the government could determine that the marginal net social benefits accruing to the public per dollar of maintenance expenditure would need to be approximately equal for all facilities in public infrastructure. However, to state such a requirement is only to highlight the reality that no calculational means exist by which the government could do so.

Hence, the common practice of labeling public infrastructure as ‘public capital’ is a totally inapt

---

<sup>18</sup> James M. Buchanan. 1969. *Cost and Choice: An Inquiry in Economic Theory*. Chicago: University of Chicago Press, p. 60.

<sup>19</sup> Unless this requirement were met, the maintenance undertaken by the government would not be able to replicate the process by which the entrepreneurial enterprise maintains capital.

and misleading metaphor. It can not be labeled ‘public capital’ because the planning process focused on the maintenance of ‘income’ that underlies true capital is entirely absent in the case of public infrastructure. Ludwig von Mises notes the following:

The notion of capital makes sense only in the market economy. It serves the deliberations and calculations of individuals or groups of individuals operating on their own account in such an economy. It is a device of capitalists, entrepreneurs and farmers eager to make profits and to avoid losses. It is not a category of all acting. It is a category of acting within a market economy. ... government would badly need the concepts of capital and income as a guide for its operations. However, in an economic system in which there is no private ownership of the means of production, no market, and no prices for such goods the concepts of capital and income are mere academic postulates devoid of any practical application. In a [such an] economy, there are capital goods, but no capital. ... The notion of capital makes sense only in the market economy.<sup>20</sup>

The entrepreneurial plan itself is the key element that allows capital goods to become capital. Without such a plan, such goods are only things without a clearly defined purpose. Without a plan that generates appropriable revenue from the sale of a good or service, there is no calculational guide to maintenance. Hence, the elements or components of public infrastructure can only metaphorically be defined as ‘public capital.’ But the metaphor misleads. While components of infrastructure exist because of a governmental plan, the maintenance of these elements of ‘public capital’ cannot be seen as part of an integrated, coherent plan.

### III. Maintenance of Legislative and Bureaucratic ‘Capital’

The idea that public infrastructure represents a form ‘public capital’ is shown to be no more than an inapt metaphor by the fact that there is no calculational foundation for its maintenance. But other forms of essentially metaphorical ‘capital’ distract from maintenance of public infrastructure. Legislators and bureaucrats maintain of ‘political and bureaucratic capital.’ These capital metaphors refer to the time-structured strategies employed by public officials in pursuing their public and political careers.<sup>21</sup> For both legislators and bureaucrats, careers

---

<sup>20</sup> Mises.” *Human Action*, p. 264. Joseph Schumpeter observed: “capital is then an agent in the exchange economy. A process of the exchange economy is given expression in the capital aspect, namely the transfer of productive means to the entrepreneur. There is therefore in this sense only private and no ‘social’ capital.” Joseph A. Schumpeter. [1934] 1959. *The Theory of Economic Development*. Cambridge, Massachusetts: Harvard University Press, pp. 122-123. Schumpeter’s use of the word ‘social’ in this context would be more accurately read ‘public.’ While Schumpeter’s reference to ‘social capital’ does not necessarily refer to public infrastructure as such, his intent is clearly to emphasize the reality that the idea of capital is inherently in the province of the entrepreneur functioning in an environment of private property and implied freedom of exchange.

<sup>21</sup> Public officials have been described as ‘utility maximizers.’ See for example, Anthony Downs. 1967. *Inside Bureaucracy*. Boston, Massachusetts: Little Brown and Company, pp. 81-82. However, such a characterization is relatively static in that it ignores planned, goal oriented actions undertaken over the course of time to achieve uncertain future ends. The concept of utility itself ignores that fact that valuation can never be more than a relative ranking made by an individual human being at a particular moment in time. In addition, all action is undertaken

become the capital that is maintained or enhanced by the time structured strategies that they pursue. Maintenance, in this context of career, refers to the actions undertaken by legislators and bureaucrats to maintain their power, influence and job satisfaction. A focus on career as a form of ‘capital’ should not necessarily be inferred as an absence of humanitarian aspirations in the chosen actions of legislators and bureaucrats. The point is that the maintenance of this metaphorical capital means that action is directed toward objectives that may be largely or totally divorced from concerns focused on public-infrastructure maintenance. In their pursuit of personally chosen ends, they must husband tools or ‘metaphorical capital goods’ to implement their plans. But what capital goods are employed in the capital maintenance process? The metaphorical capital goods (as distinct from metaphorical capital) that must be employed by legislators and bureaucrats depend directly on the constituencies that must be ‘served’ to maintain or enhance career prospects. These capital goods may be intangibles involving subjective judgments about the future and the actions required to achieve career ends. The argument offered here is that these actions are frequently perverse to the interests of maintaining public infrastructure.

#### A. Maintenance of ‘legislative capital’ in infrastructure neglect

In the preceding discussion, the assumption was made the government was some sort of single thinking entity acting on behalf of the public. However, government is composed of many individual human beings each with their own self-defined objectives. One group of such people is comprised of legislators who have the redoubtable power to affect the allocation of economic resources in the roll call votes of legislatures. The actions of legislators have been explored as a kind of political entrepreneurship in which his objectives are focused on the protection of his legislative influence in the legislature (i.e., power) and political re-electability and scope of.<sup>22</sup> In essence, the legislator may or may not be motivated by a sense of civic responsibility and public duty. One theoretical approach identifies two broad concerns of (1) *legislative power* and (2) *re-electability* within the voting constituency. The employment of these metaphorical ‘capital goods’ can be viewed as having a time-structure analogous to that forming the basis of Austrian capital theory.<sup>23</sup> In this context, the legislator’s votes to commit resources to the maintenance of public infrastructure can be realistically seen as a decision to use the capital good of *power* to enhance the capital good of *electability*. But at the same time, such actions must also be seen as an effort to maintain the *capital* as represented by the legislator’s *career*.

---

with an awareness of time and recognition that something must be ‘invested’ in the present to attain some type of future objective. Hence, the official’s ‘career’ is a more likely motivator of self-defined action than mere static ‘utility.’ By labeling the official’s career as a type of ‘metaphorical capital,’ one accommodates the reality that public officials make short term sacrifices to achieve longer, more highly ranked personal aspirations. But these aspirations may not be represented by a pecuniary investment worth.

<sup>22</sup> A.T. Denzau and M.C. Munger. 1986. “Legislators and Interest Groups: How Unorganized Interests Get Represented.” *American Political Science Review*. 80(1): 89-106.

<sup>23</sup> The discussion here is heavily reliant on a brilliant paper by Edward Lopéz; see: Edward Lopéz. 2002. “The Legislator as Political Entrepreneur: Investment in Political Capital.” *Review of Austrian Economics*. 15 2/3: pp. 211-228. Lopéz employs the terms *representative capital* and *reputational capital*. However, the terms *power* and *re-electability* are used here, respectively, as reasonably approximate synonyms.

The strategic actions of the legislative entrepreneur are manifested in roll call votes that the legislator hopes will result in a net accretion of one or both of these two so called forms of capital goods: *power* and *re-electability*. Power generally refers the legislator's political standing and power within the legislature itself. Committee assignments, seniority, working alliances with prominent legislators and legislative experience are all indicators of a legislator's power. On the other hand, re-electability would presumably includes party affiliation, voting record, campaign platform, name recognition and any other attributes that may serve as predictors of political performance.<sup>24</sup> Election defeat would be an indication that the capital good, *re-electability*, is totally depleted and would arguably be seen as being the equivalent of bankruptcy.

The labeling of *power* and *re-electability* as capital goods may require some critical clarification. Ludwig von Mises made a sharp separation between capital goods and capital itself, emphasizing the idea that capital itself is solely a feature of the market economy. Hence, capital goods are the assets marshaled by the entrepreneur in pursuit of a business plan designed to earn a monetary come. Capital is the entrepreneur's appraisal of the capitalized investment worth of that business plan to employ the capital goods. Though 'legislative capital' is not a feature of the market economy as defined by Mises, the distinction between capital and capital goods is still important even in a metaphorical context not directly related to market interactions. For any actor, there can be only one type of capital and that is the value to the actor of his overall plan. The actual *capital* in this political-capital framework would be the legislator's 'valuation' of his political career, the maintenance of which depends upon the way in which these two capital goods or assets are managed. Hence, in the remainder of this discussion, reference will be made to *power* and *re-electability* both of which the legislator marshals in the implementation of his career plan.

In this framework, the legislator must be attentive to three different 'blocks of power.' These include (a) his unorganized constituent voters, (b) organized interest groups, (c) the party leaders in the legislature.<sup>25</sup> The members of each of these power blocks are in quest of some type of 'advantage' from a particular legislative action or role-call vote; these sought advantages are sometimes referred to as 'rents.' Thus, in choosing his position on each roll-call vote, the legislator must service the members of these respective groups in such a way that the legislator's 'career capital' itself is maintained or even enhanced. But in each roll-call vote to service members of each of these power blocks, there is an opportunity cost in terms of the way in which the *power* and the *re-electability* may be diminished. Each roll-call vote involves a possible or potential tradeoff between *power* and the *re-electability*. But this tradeoff can be seen as reflecting a genuine uncertainty meaning the successful legislator must apply entrepreneurial judgment in each roll-call vote. Servicing one block may (or may not) involve a large sacrifice in terms or support from other blocks. Organized interests and part leader are powerful in the legislator's political world. Hence, particular efforts to service unorganized voter constituents may involve a significant depletion of the *power*. But on another roll call vote, servicing members of organized interests may involve little sacrifice of *re-electability* as anticipated in the

---

<sup>24</sup> Edward Lopéz, pp. 213-214.

<sup>25</sup> Edward Lopéz, p. 211.

support of voter constituents. In maintaining career capital, the legislator may choose to service voter constituents up to the point at which reelection is reasonably well assured but beyond that point servicing constituents may exact a large sacrifice in terms of support from party leader and organized interest groups.

The rationale for focusing on legislator's roll-call votes is that each vote can be motivated by goals having time structure in terms of the way in which the *power* and the *re-electability* are allocated in servicing the respective power blocks. The time structure emerges in the fact that the roll-call votes affect the members of the respective power blocks differently at different moments in time. Some votes have virtually immediate impact and would be viewed as analogous the production of consumer goods or lower order goods in the framework of Austrian capital theory. Votes on downward adjustments in home assessments in levying taxes may be an example of such a decision. However, votes on relaxing constitutional constraints on term limits may, in the legislator's mind, be viewed as an example of a legislative action with long term implication in terms of career capital.

How may the neglect of public infrastructure arise in the context the legislator's attempt to maintain the value of his capital -- that is the enhancement in his career as a legislator? One can readily envision scenarios in which neglect of public infrastructure may arise from the legislator's lack or shortage of the *'re-electability'*. One of the more extreme consequences of such shortage may be legislator's the defeat in next election. Political defeat may occur for numerous reasons but one can imagine envision a scenario in which the legislator has been accreting the *power* perhaps to the neglect of the *re-electability*. This latter neglect may have its origin in a failure on the legislator's part to assure budget funding for the maintenance of public infrastructure in his district. Perhaps in so doing, the legislator may have been focused on the 'rent seeking' of organized special interest or party leaders. But in the eyes of affected constituents, such neglect may be seen as political neglect. If the legislator were operating under a supposition that users of public infrastructure were an unorganized power block, he may be lulled into some inattention to constituent interests. While in general, the legislator may be accurate in such an assumption regarding the nature of the using constituency, in the face of evident infrastructure neglect, this unorganized interest group may become organized with the goal of defeating the legislator in the next election.

While the legislator may well neglect budget funding for infrastructure maintenance in his home district, this voting behavior may not result in his defeat in the next election. The legislator may have established sufficient *power* and *re-electability* to remain in office and pursue legislative objectives other than maintenance of public infrastructure in his home district. Conceivably, in such pursuits, the legislator's motives may be humanitarian involving an erstwhile effort to help his voting constituency. But the legislator will not be unmindful of the fact that such actions will further enhance his *re-electability*. The legislator may have sufficient seniority and standing in the legislature to enhance his *re-electability* by sponsoring and accomplishing the passage of funding for *new infrastructure facilities* in his home district. Such projects may draw significant press coverage enhancing the legislator's public image. While such an accomplishment may be well motivated and may well enhance the legislator's electability, existing infrastructure would remain neglected.

But neglect of public infrastructure may arise from the legislator's 'shortage' of the *power*. Such a scenario may be reflected in the legislator's failure or inability to generate support within the legislature for maintenance budgets that would finance infrastructure maintenance in his home district. In this case, defeat within a particular roll-call vote, may arise from the legislator's shortage the *power*. This shortage may be reflected in a failed logrolling negotiation or a lack of sufficiently strong alliances within the legislature. The consequence may be the prevention of maintenance of highways, streets, sewer systems or bridges in the legislator's home district. This neglect may occur even though the legislator may be a well-intentioned champion of efforts to maintain these infrastructure facilities. But it is also clear that such a failure on the legislator's part may occur simply from a lack of seniority within the legislature itself.

This description of legislator action is cast as a process of time-structured political capital maintenance in which *power* and *re-electability* are managed with the intent of enhancing the legislator's political career. As a model of political capital maintenance, the legislator's time preference is critical in the timing and allocation of his two capital goods of *power* and *re-electability*. But to note an obvious point, any time-structured resource allocation for maintenance that may derive from the legislator's actions may be totally divorced from any time cycle of depletion, deterioration or depreciation that may be occurring with respect to public infrastructure. Hence, in the absence of an overt threat to re-electability, the legislator's actions over time may well result in chronic neglect of public infrastructure.

## **B. Maintenance of 'bureaucratic capital' in infrastructure neglect**

Like political capital, bureaucratic capital can be seen as a metaphorical construct that can shed light on actions or inaction of bureaucrats over the course of time. The type of bureaucrat of concern here is the senior executive bureaucrat in a position to affect the way in which a bureau's resources are allocated. And again, as in the case of the legislator, *the metaphorical capital in question is the bureaucrat's career*. The way in which the bureaucrat views his career may take into account several subjectively defined sources of appeal that have been listed and discussed by others.<sup>26</sup> In any case, the career is the overarching 'metaphorical capital' that governs the bureaucrat's actions and use of the resources (metaphorical capital goods) that may be at his disposal. The bureaucrat's metaphorical capital being his career suggests an aspect of the time-structure of capital maintenance that may govern the bureaucrat's actions while in government service. While the bureaucrat may have earnest intentions of doing 'good job,' not surprisingly, the 'maintenance of capital' for the bureaucrat may have little to do with infrastructure or the need for its maintenance. The bureaucrat's overriding concern with career would apply even in the cases of bureaucrats that have direct managerial responsibility for

---

<sup>26</sup> William Niskanen mentions salary, perquisites of office, public reputation, power patronage, output of the bureau, ease of making changes and ease of managing the bureau; see: William Niskanen. 1971. *Bureaucracy and Representative Government*. Chicago: Aldine Atherton Publishing Company, p. 38. Anthony Downs takes a somewhat more idealistic posture in mentioning a similar list including: power, income prestige, security, convenience, loyalty, pride in work and desire to serve the public interest. See: Anthony Downs, *Inside Bureaucracy*, p. 2. Both of these economists take a rather static approach to defining the arguments of a 'utility function.' In other words, they do not attempt to explore the actions of bureaucrats in terms of time-structured strategy.

maintenance of particular items in public infrastructure. However, the vast majority of bureaucrats function in a capacity in which infrastructure maintenance may be at most only an ancillary consideration. Nonetheless, the focus in this discussion is on the actions and aspirations of managing bureaucrats who are in a position to be instrumental in the way in which resources are committed to infrastructure and its maintenance.

While the bureaucrat is not an elected official, he must realistically face his own constituencies and power blocks in managing the metaphorical capital as defined by his career aspirations. These include: (a) appointing officials to whom the bureaucrat reports, (b) sponsoring legislators, (c) subordinates within the bureau,<sup>27</sup> (d) that segment of the public most sensitive to the bureau's activities (i.e., self selected 'stakeholders'), and (e) prospective future non-governmental employers. The latter item in this list would apply particularly to appointed executive bureaucrats whose long-term career objectives may lie outside of government.<sup>28</sup> The ability of the bureaucrat to deal with and satisfy the demands or wishes of these respective and prospective constituencies determines the nature of the metaphorical 'capital goods' that must be marshaled by the bureaucrat in managing the capital represented by his own career.

But what are these metaphorical capital goods? To some major extent, the answer can hinge on the ostensibly ambiguous nature of 'success' for the executive bureaucrat. He may gear his activities to faithfully trying to achieve the statutory goals of the bureau or he may simply focus on appeasing or pleasing the various constituencies mentioned above. But the point is that there are no precise, quantifiable criteria to objectively 'measure' the success of the bureaucrat. What constitutes success for the bureaucrat has been realistically described by James Wilson in the following way:

The head of a business firm is judged and rewarded on the basis of the firm's earnings – the bottom line. The head of a public agency is judged and rewarded on the basis of the appearance of success ... when success can mean reputation, influence, absence of criticism, personal ideology, or victory in policy debates. Sometimes, of course success means achieving the agency's goals ... but many agencies have goals so vague, controversial or difficult to achieve that progress toward their realization is hard to assess. Moreover, rewards for public executives are not wholly, or even primarily, tangible; just as important are the intangible ones, egotistic or ideological considerations such as popularity, a reputation for power or identification with a cause.<sup>29</sup>

---

<sup>27</sup> While the bureaucrat has managerial authority over subordinates, he is unlikely to experience much success in his position if he pursues courses of action that ignore the career aspirations of those under his organizational control.

<sup>28</sup> James Q. Wilson observes that the career of the appointed bureaucrat may involve relatively brief stints in a particular governmental position. For the executive bureaucrat, longer-term career goals would no doubt involve employment in the private sector or perhaps in academic institutions. Even though the actions of the appointed official may not directly affect the interests of such prospective employers, the official must at the same time be sensitive reputational issues that may devolve from his actions while in public office. See: James Q. Wilson. 1989. *Bureaucracy: What Government Agencies Do and Why They Do It*. New York, NY: Basic Books, p. 209.

<sup>29</sup> Wilson, *Bureaucracy*, p. 205.

The intangible and subjective nature of bureaucratic success is succinctly captured in the following remark by former Treasury Secretary Michael Blumenthal: “You can be successful if you appear to be successful ... appearance is as important as reality.”<sup>30</sup> This Machiavellian perspective suggests that the output and ‘productivity’ of the bureaucrat are what the various constituent groups are led to think it is. Of course the bureaucrat may be motivated by more than just the ‘appearance of success.’ But even in this case, success may be only a subjective sense of job satisfaction known only in the bureaucrat’s mind. Nonetheless, these observations provide a lens through which one can begin to recognize the plethora of aspirations and concerns that may distract the bureaucrat’s attention from infrastructure maintenance.

Hence, the metaphorical capital goods required to give the bureaucrat the appearance of success include: (1) *budgets*, (2) *reputation* and (3) *control*. While these metaphorical capital goods can be complementary, they can, to some extent, offer critical tradeoffs in defining and constraining the scope of action that best enhance the bureaucrat’s longer-term career aspirations. The question here is: as the bureaucrat employs these metaphorical capital goods in furtherance of his own career, how will infrastructure maintenance weigh into his actions? Clearly, the bureaucrat will only employ the above listed ‘capital goods’ to foster the maintenance of public infrastructure if such action maintains or preferably enhances the prospects of attaining the goals that define his career ambitions. Otherwise passive neglect of infrastructure may well be rational and routine for the bureaucrat.

In light of the disparate interests of the respective constituencies with whom the bureaucrat must deal, the bureaucrat must be aware of tradeoffs in terms of how these metaphorical capital goods can be employed. These tradeoffs are essentially subjective in the bureaucrats mind and necessarily reflect genuine subjective uncertainty as his understanding of the future evolves. However, at any particular moment in time, larger *budgets* can serve several complementary longer-term purposes in terms of dealing with these respective constituencies. Larger budgets accommodate the ambitions of subordinate bureau personnel by offering the prospect of greater opportunities for promotion and for career enhancements.<sup>31</sup> Also, larger budgets may serve the aspirations of both the appointing official to whom the bureaucrat reports and sponsoring legislators that may want the bureau to embark upon projects with higher public profiles than what may be seen as the more mundane concerns of infrastructure maintenance.

To the extent that the bureaucrat is able to be instrumental in providing the bureau with *larger budgets*, appointing superiors, sponsoring legislators and bureau personnel are more likely to applaud the bureaucrat’s performance. In a political sense, achieving a larger budget for the bureau may, in some cases, be more important than the way in which funds are actually spent.

---

<sup>30</sup> As quoted in Wilson, p. 205.

<sup>31</sup> Aaron Wildavsky has well described the symbiotic relationship between bureaucrats and legislators: “If the agencies suddenly reversed roles and sold themselves short, the entire pattern of mutual expectations would be upset, leaving the participants without an anchor in a sea of complexity.” Aaron Wildavsky, “Budgeting,” *International Encyclopedia of Social Sciences*, Volume 2, p. 192, as quoted in Niskanen, *Bureaucracy and Representative Government*, pp. 40-41.

The effort expended to enhance this capital good (*budget*) would generally augur well for the bureaucrat's *reputation* and may increase the *control* (degree of latitude) that he may enjoy in future undertakings.<sup>32</sup> If successful in such endeavors, the bureaucrat should be able to maintain or enhance his 'capital' as represented by his longer terms career objectives. But, one must ask, with such success, what is the likelihood that infrastructure maintenance will be a prominent concern as the bureaucrat plans his action? The bureaucrat must be sensitive to the general public in considering programs of infrastructure maintenance that could be undertaken by the bureau. Infrastructure neglect could conceivably draw unfavorable press affecting the bureaucrat's reputation among the general public. However, unless the affected infrastructure involves roads or bridges, public reaction to neglect is likely to be tepid or nonexistent.

Clearly larger government and expanding public budgets do not necessarily imply the availability of more resources for maintenance of depreciating infrastructure. If the relative neglect of infrastructure occurs without significant negative feedback from the public, the bureaucrat may be better served by pursuing ventures that are more likely to draw favorable reaction from appointing officials and sponsoring legislators. For example, to the extent that the bureaucrat is successful in achieving larger budgets for a bureau, it is not unlikely that the additional resources will be allocated to the building of some type of *new* infrastructure facilities as opposed to maintenance of *existing* facilities. Hence, the actions and goals of a public official in employing the metaphorical capital goods of *reputation* and *control* may well be at odds with maintenance of *existing* public infrastructure. In other words, new infrastructure may offer the bureaucrat more *reputation-enhancing* ways of dealing with the respective constituencies mentioned. Projects aimed at the maintenance of existing public infrastructure may be less 'newsworthy' meaning that there is less political leverage than would be the case with new projects. If the bureaucrat were to throw his support behind the new project, he is more likely to be cast in a more prominent and more favorable public light. This attention most generally translates into enhanced *reputation* and possibly greater *control*.

Moreover, bureaucrats who rank projects will not necessarily be making these decisions in the name of the benefits that may accrue to the affected public. While new infrastructure projects find favor with the constituencies that the bureaucrat must please, these projects tend to crowd out the possibility of funding for maintenance of existing infrastructure. Moreover, in their planning, public officials are likely to employ a planning horizon that may not be congruent with the realization of any benefits afforded by publicly supported maintenance projects. More generally, the money spent for these projects will not necessarily reflect any attempt at what some may view as a 'rational reckoning' of collective need.<sup>33</sup> In undertaking actions with respect to infrastructure expenditures, 'efficiency in resource allocation.' may not be a prominent consideration. The bureaucrat may not necessarily be particularly concerned with the net social benefits of one project as opposed to another competing project. Opportunity cost will not be reckoned in terms of foregone or relinquished 'social benefits' that may be associated with

---

<sup>32</sup> On the subject of the bureaucrats need for control, see: Eugene Lewis. 1980. *Public Entrepreneurship: Toward a Theory of Bureaucratic Political Power*, Bloomington: Indiana: Indiana University Press, 18-19.

<sup>33</sup> Anthony Downs. 1957. *An Economic Theory of Democracy*. New York, New York: Harper & Brothers, p. 91.

committing to one project infrastructure project as opposed to another. Rather, the bureaucrat will focus on the way in which his *reputation* and *control* appear to be affected by choosing to support one infrastructure project over a competing alternative. He will reckon benefits in terms of his own gain as may be reflected in his future career prospects, both in or out of government. For example, he may quantify the ‘benefits’ in terms of the likelihood of winning a sought-after promotion. Or, the bureaucrat may have longer-term aspirations to a particular position out of government service. But whatever the nature of the bureaucrat’s decision, he will always attempt to explain his actions in terms of the project’s greater benefit to the community.<sup>34</sup> However his real unspoken motives will be centered upon the advancement of his professional career.

#### IV. Conclusions

Is the solution to be found in a refocusing of governmental spending and committing resources to more aggressive restructuring of priorities? Conventional wisdom would prompt a ‘yes’ in response. According to conventional economic orthodoxy, the elements of public infrastructure such as roads, bridges water systems, sewer systems, streets, dams, etc. come into existence because the services they yield are presumed to be public goods that (according to received wisdom) would otherwise not be provided by private entrepreneurial initiatives. But the public-good presumption has been challenged; with respect to some such items of infrastructure, there is ample evidence to discredit the premise that the yielded services would not be provided through private entrepreneurial initiatives.

However, the point of this paper has not been to debunk the suppositions surrounding the public-good mythology. Rather, the focus has been on the much narrower issue of maintenance. Concepts of capital have provided insight into the fact that neglect is an inherent part of governmental provision of the facilities that are part of what is currently viewed as part of public infrastructure. First, the institutions of private property and monetary exchange mean that entrepreneurs are able to employ capital goods to maintain a monetized income stream. Attaining this objective is the essence of capital maintenance. The capital goods employed by the entrepreneur make up the private infrastructure of the entrepreneurial enterprise. But maintenance of private capital involves the implementation of an integrated plan that is not necessarily focused on maintenance of the capital goods themselves but rather on the maintenance of the enterprise’s income. But no such plan is possible in the case of public-infrastructure maintenance when viewed as a comprehensive whole. The absence of true property rights and an integrated income stream makes ‘capital calculation’ impossible meaning that neglect is an intrinsic feature of so-called public provision.

But public infrastructure neglect is also found to be a likely consequence of the longer-term career strategies of legislators and executive bureaucrats. These career strategies are seen to be a form of metaphorical capital in which self-serving acts of ‘capital maintenance’ can logically result in infrastructure neglect. These actors find themselves employing and managing the

---

<sup>34</sup> Ibid., p. 91.

resources (metaphorical capital goods) at their disposal in pursuit of goals in which infrastructure maintenance may be only an ancillary concern. They will only be strong supporters of public infrastructure maintenance if doing is complementary of their longer-term career ambitions.

As a mere habit of language, facilities of infrastructure are conventionally labeled as ‘public’ by the simple fact that they have been built by governments with tax revenues and not by any inherent public-good nature of the services they yield. What are the implications of this fact as they apply to future policy with respect to infrastructure and its maintenance? Clearly, the existence of so-called public infrastructure cannot be justified on the basis of the public-good argument. But at the same time, the presumptive responsibility for infrastructure maintenance cannot be justified on the basis of the public goods argument. In fact, capital concepts suggest that ownership and maintenance should never be within the government’s scope of responsibility.

