Bureaucracy, Democracy, and Institutional Change: Caltrans as a Case Study

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ABSTRACT

This paper analyzes the extent to which bureaucracies sustain or impede the progress of democracy when they are under pressure to change from elected officials. It does so by answering the following questions. To what degree do government agencies remain committed to Weber’s bureaucratic ideals of equality and representation when they are under change? And, whether it is possible, or even desirable, for elected representatives to fully control their bureaucracies. As a case study, this paper examines a dynamic between the California State Government, and its primary transportation agency, the California Department of Transportation (Caltrans) with the instigation of New Public Management (NPM) over a span of two decades. As a tool to explain why Caltrans chose to resist change, this paper draws on the new institutional model, in that, adaptations that were once rational responses to the external environment become frozen into organizational structures, which then constrain future bureaucratic change.
Introduction

This paper analyzes the extent to which bureaucracies sustain or impede the progress of democracy when they are under pressure to change from elected officials. It does so by answering the following questions. To what degree do government agencies remain committed to Weber’s bureaucratic ideals of equality and representation when they are under change? And, whether it is possible, or even desirable, for elected representatives to fully control their bureaucracies. These questions have a high degree of relevance, because bureaucracy is indispensable for both democracy and capitalism. For example, Weber’s concern was not only with the organization of bureaucracies, but also with the democratic order, which requires a well functioning bureaucratic apparatus. As a tool to explain why bureaucracies resist change, this paper also draws on the new institutional model as a competing and often complimentary theory to Weber’s thoughts concerning organizational behavior. The crux of the new institutional model is adaptations that were once rational responses to the external environment become frozen into organizational structures, which then constrain future bureaucratic change.

As a case study, this paper examines a dynamic between the California State Government, and its primary transportation agency, the California Department of Transportation (Caltrans) with the instigation of New Public Management (NPM) over a span of two decades. It finds that California cannot fully control Caltrans, and this has both positive and negative implications. It is positive, because by preserving the old legal-rational organizational form this, in affect; facilitates the continuation of neutrality, equality, and representation. On the other hand, this brings up the issue of accountability, especially, if intuitional change is the interest of efficiency, without necessarily compromising democratic ideals.

Caltrans is a large and fairly old bureaucracy. Its historical origins begin in 1895 as the Bureau of Highway, and it is the owner and operator of 15,000 miles of the California State Highway System. It has more than 20,000 employees, and an annual budget of over six billion dollars. Caltrans is also a leader in the field of transportation engineering, and is, in fact, the second largest civil engineering organization in
the world. However, despite its size, reputation, and institutional history, the organization has not been immune to change, and has, in fact, been under considerable stress to do so for the last sixteen years.

As an illustration, in September 1992, the California State Senate passed Concurrent Resolution Number 72. This gave the Legislative Analyst’s Office (LAO) the authority to conduct a study concerning, “the organizational structure and management of Caltrans in light of the state’s changing transportation needs.” Yet, eight years later, the same fundamental criticism was levied against Caltrans in the LAO’s analysis of the 2000-01 budget. In that, “Caltrans’ ability to deliver projects may be hampered by project management practices.” The LAO’s primary criticism was that project managers within Caltrans have limited decision-making authority due to an unchanging organizational structure that was not facilitating to a project management organization. Therefore, the California Legislature by forcing Caltrans to change and adopt an alternative organizational form, nonetheless, observed an unanticipated institutional response contrary to its short-term interests of accountability with the legislature, however, not necessarily against its long-term goals of providing neutrality and equality to its other customers – the people.

Bureaucracy and Democracy

To Weber, the need for bureaucracy results primarily from the process of modernization. That is, in the modern state, the increasing demands for bureaucratization takes place because of the increasing complexity of civilization. Whereas, “The larger the state, and the more it is or the more it becomes a great power state, the more unconditionally is this the case.” A fundamental component adding to this complexity is the need for transportation infrastructure. According to Weber:

> Among essentially technical factors, the specifically modern means of communication enter the picture as pacemakers of bureaucratization. Public land and water-ways, railroads, the telegraph, et cetera – they must, in part, necessarily be administered in a public and collective way; in part, such administration is technically expedient.

What drives this complexity that Weber describes is the emergence of economic markets, and the resulting centralized states. For example, “A market economy functions only if it is backed by the necessary institutional and legal framework.” Therefore, bureaucracy is only fully developed in the
modern state, and, in the private economy, and only in the most advanced institutions of capitalism.\(^9\)

There becomes a need for rationally controlled actions (especially where economic results are sought), and the well-trained staffs of bureaucracies can only accomplish the precision, speed, and consistency that is necessary for a market economy.\(^{10}\)

Moreover, the development of capitalism has a parallel emergence with democracy. For Dahl, the “modern democratic countries have generally tended to provide a more hospitable environment in which to achieve the advantages of the market economies and economic growth than have the governments of nondemocratic regimes.”\(^{11}\) For Weber, the progress of bureaucratization also encourages the development of democracy. The rational character of bureaucracy, which embodies rules, means, ends, and matter-of-factness, destroys the old structures of domination, such as feudalism or patriarchy.\(^{12}\)

Thus, a strong link exists between democracy and bureaucracy. Schumpeter saw the existence of a professional, nonpolitical bureaucracy as one of the basics on which democracy rests.\(^{13}\) To Suleiman, “Government authority cannot be exercised without professional state structures, and democratic legitimacy cannot be attained without such an instrument.”\(^{14}\) For example, during the crucial phase of the transitions in Central and Eastern Europe, there was a lack of appreciation of how important a professional bureaucracy is to the consolidation of democracy, and to the imperatives of economic development.\(^{15}\)

If one accepts the argument that democracy and capitalism depend on stable legal-rational structures for their continuing existence, then bureaucracies do it best. The primary reason for the development of bureaucratic organization has always been its purely technical superiority over other organizational forms.\(^{16}\) That is, rationalized formal structures develop in institutions, because there are comparative advantages to structures that have interconnected rules and routines to define what action is adequate between a role and a situation.\(^{17}\) To Weber, “The management of the office follows general rules, which are more or less stable, more or less exhaustive, and which can be learned which the official possess.”\(^{18}\)
Nevertheless, the close connection between democracy and market-capitalism conceals a contradiction, because a market-capitalist economy inevitably generates large inequalities. To be exact, the relation between a country’s democratic political system, and its non-democratic economic system, imparts a complex and unremitting challenge to democratic goals and practices. However, for Weber, the characteristic principles of bureaucracy are a direct consequence for the demand for equality before the law. That is to say, “Equality before the law’ and the demand for legal guarantees against arbitrariness demands a formal and rational ‘objective’ of administration.” This becomes even more an imperative, because the funding of government programs by coerced payments must (or tax revenues) benefit, in principle, all the people equally and fairly.

In the practice of civil engineering, an important goal of government bureaucracies is to ensure fairness (or procedural due process), by shielding vulnerable parties from the negative externalities of development. In Caltrans, the mechanism to ensure fairness is the environmental permitting process - for example to ‘Give notice,’ ‘Hold hearings,’ and to ‘Encourage participation.’ For example, “The Army Corps of Engineers can describe exactly how a dam should be built and verify that it was built that way, but woe betide it if it goes ahead with a dam without extensive public consultation and close attention to environmental issues.” In accordance with the democratic standards, citizens must have a right to investigate alternatives, and to participate in deciding how and what should go on any agenda that influence their environment.

However, this conceals yet another paradox. In the effort to guarantee fairness and equality through the bureaucratic process, administrators end up processing a high amount of discretionary authority. In a democracy, citizens not only delegate authority to their elected representatives, but, “by an even more indirect and circuitous route, they delegate authority to administrators, bureaucrats, civil servants, and judges.” To Weber, and in accordance, democracy reacts precisely against the unavoidable status character of bureaucracy. While democracy seeks to regulate the appointment of elected officials for short durations through the electoral process, bureaucrats are very hard to remove from office, and often serve lifetime appointments.
In spite of these apparent contradictions, to Dahl, the delegation of certain decisions to experts is not equivalent to ceding final control over them. For instance, “democratic government requires bureaucratic accountability, and that means that no one wholly can be trusted to make important choices free of legal and administrative constraints.” Still, Weber cautions that bureaucracy as a precise instrument can put itself at the disposal of varied political as well as economic interests for the sake of domination. Therefore, “the measure of its parallelism with democratization must not be exaggerated.”

The Universalistic Principles of Bureaucracies

This section of the paper discusses some of the important features of Weber’s rational-legal ideal bureaucracy, and how Caltrans, for the most part, approximated this ideal type before the reorganization along the schema of New Public Management. One of the most important aspects of this type is the rules or standard operating procedures. To Weber, the greatest asset of bureaucracy is an institutional method for applying general rules to specific cases, thereby, making the actions of government fair and predictable. The rules enable the bureaucrat to pursue a rationalistic way of life through the principle of specializing administrative functions according to purely objective considerations. The development of rules in bureaucracies reduces the chance that they do not violate an important contextual goal or constraint - such as treating citizens fairly (equity), and ensuring that citizens will have the same opportunity to receive services (equality).

It is not an exaggeration to state that many consider a defining characteristic of Caltrans, the necessity of applying the standard rules and procedures for seemingly every imaginable occasion. Moreover, state employees not only use these regulations, but also private engineers for guidance. This is especially true when private firms use federal or state funds for transportation projects, and therefore must operate under the same bureaucratic constraints. In Caltrans, every functional unit has an exhaustive list of standard operating procedures. In the Project Management Division, the rules are listed in the Project Development Procedures Manual (PDPM), in the Design Division they are delineated in the Highway Design Manual (HDM), in the Right-of-Way Division they are enumerated in the Right-of-Way
Another essential feature of Weber’s rational-legal ideal type is a highly regularized system of recruitment and promotion procedures in the interests of professionalism and neutrality. In the Federal Government, these principles reside in the Pendleton Act (1883), with three main goals: (1) to hire public employees on the basis of merit rather than political connections, (2) to manage these employees effectively, and (3) to treat employees equally. In California, the State Civil Service Act of 1937, led to establishment of the current civil service system with two main goals: (1) to prohibit a political spoils approach to state government jobs, and (2) to assure a competent, and efficient work force. Under California civil service rules, all appointments and promotions must be made under a general system based on a competitive examination.

Hierarchy is another essential feature of the Weberian rational-legal ideal type. To Weber, “The principle of hierarchical office authority is found in all bureaucratic structures.” In traditional public management agencies, the emphasis is on command and control as the modus of operandi. This means, “that public action is carried out by hierarchical organized agencies whose central spinal cord is the chain of command.” To some, centralized control is also vital to the preservation of democratic accountability.

The historical structure of Caltrans was modeled on the hierarchical type. The principle behind the hierarchical form is in the ‘Doctrine of Specialization,’ in that; it is easier to manage specialists by grouping them together, and supervising them by an individual possessing similar skills and experiences. In Caltrans, the hierarchical type was (and still is for the most part), broken down into various functional units, such as planning, environmental, design, right-of-way, and construction. In this arrangement, each functional unit possesses its own internal hierarchical structure that reports to the headquarters offices in the regional districts, or in to the main office in Sacramento.
The Production and Procedural Organization

Although, Weber’s description of bureaucracy is instructive, we can draw on other theories of bureaucratic organization to explain more fully Caltrans. Relating to transportation development, Caltrans is, for all intensive purposes, two distinct organizations operating under one umbrella organization. Wilson describes two types of organizations that accurately characterize this dichotomy. The first type of organization is the production organization, which correctly classifies the traditional project development functions such as design, construction, and right-of-way in Caltrans. The other typology is the procedural or coping organization, which correctly describes the environmental side of Caltrans.

In production organizations, it is easy to observe the work and its results, because, “Production organizations, having clear and attainable goals, are more easily evaluated from the standpoint of economic efficiency, and thus the cost of any given constraint is more easily assessed.” The traditional activities that engineers do are, for the most part, easy to observe, and produce results. For example, in the United States Army Corps of Engineers outcomes “could be evaluated: It was easy to learn whether the air base was built on time and within budget, and it was not too difficult whether it was built according to specs.” In Caltrans, the spirit of the production organization is present in its mission statement as - “We Deliver.” So important is the delivery concept in Caltrans, that the California Legislature rates it by the percent of projects and expenditures delivered every fiscal quarter.

By contrast, in procedural or coping organizations, it is impossible to evaluate them in terms of economic efficiency, because the cost of any constraint, such as providing procedural due process, is hard to assess. In Caltrans, this describes the environmental side of the organization. For example, the Division of Environmental Analysis’ mission statement is: (1) to comply with state and federal environmental laws, (2) to encourage the public to participate in the environmental evaluation process, (3) to determine the environmental consequences of our activities, (4) to propose prudent, feasible and cost
effective strategies and alternatives to avoid or minimize adverse impacts of the Department's activities, and (5) to ensure the mitigation selected is appropriate.\textsuperscript{50}

In response to the passage of a host of environmentally related laws and regulations, and heightened public support for the environment, the environmental program in Caltrans has grown to become a substantive and inseparable part of planning, development, construction, operation, and maintenance efforts.\textsuperscript{51} A similar development has been occurring in other agencies as well. For example, “The Army Corps of Engineers and the Forest Service both have changes the way in which they approach certain tasks because they were obliged to hire a large number of persons who identify with the emerging environmentalist professions.”\textsuperscript{52}

In Caltrans, the environmental process invariably leads to long project delays, and cost overruns, and this historically has invited criticism from the legislature. For example, the California Legislature has noted that as a consequence of the functional form, and the resulting communications networks that were not accommodating to the coordination of tasks beyond functional unit boundaries, Caltrans has historically delivered projects in a serial manner, whereby the project was “thrown over the fence to the next function once a specific task was over.”\textsuperscript{53} In Caltrans, before the introduction of the National Environmental Policy Act (1969), and the California Environmental Quality Act (1973),\textsuperscript{54} the historical functional (or hierarchical) form was appropriate for the traditional engineering or production side of the organization. However, the procedural or environmental side has introduced a high degree of inefficiency in the interests of fairness and equality, which are constraints as much as they are righteous goals.

**New Public Management**

To the advocates of New Public Management, the Weberian model of bureaucracy is not longer relevant because of the transformation of democratic societies. In the reform and reinvention literature, there is a belief that capitalism and democracy are no longer dependent on the role of the bureaucratic apparatus. In fact, capitalism and democracy are prevented from finding their full expression by the existence of bureaucracy.\textsuperscript{55} Weber’s account of the rational-legal type highlights many of the aspects that
New Public Management advocates see as negative.\textsuperscript{56} “Bureaucracy, it came to be argued, was unproductive, parasitic, wasteful, secretive, unaccountable, unresponsive, elitist, and fundamentally antithetical to democracy.”\textsuperscript{57} A system that is designed by a genius, but is to be run by idiots, is no longer relevant in the modern age. “Imposing strict controls in an organization, regarding employees as cogs in a machine, and expecting workers to follow instructions blindly – these are what the NPM devotees are fighting against.”\textsuperscript{58}

Over the past two decades, the modernization of public administration has largely become synonymous with the introduction of NPM.\textsuperscript{59} Countries such as New Zealand and the United Kingdom have completed thorough reforms of their ministries, civil services, and nationalized industries in the name of New Public Management (NPM).\textsuperscript{60} For the most part, the NPM reforms have taken place in democratic countries where formalized systems of control and surveillance over bureaucracies exist within a complex framework of checks and balances. In these countries, the idea is to improve on existing institutional arrangements with the use of democratic procedures.\textsuperscript{61}

Overall, NPM-style reforms embrace private sector management norms and values. These include a focus on customers, a belief in market mechanisms, the fragmentation and decentralization of public services, and the transformation of working practices within them.\textsuperscript{62} The supporters of New Public Management recommend a shift from extensive regulation and compliance management, to increased discretion and initiative for operating managers in achieving targets.\textsuperscript{63} “This contrasts with a traditional Weberian model of public administration which is instinctively centralist, bound by procedures and rules, focused on bureaucracy and legality, and driven by an ethos of public service.”\textsuperscript{64} On the whole, NPM changes bureaucracies from a rule-bound culture to a performance-based system.\textsuperscript{65}

For the detractors of New Public Management, “The innocuous-sounding criteria of performance, responsiveness and evaluation are not without their political implications.”\textsuperscript{66} The chief criticism is that democracy needs a bureaucracy to be effective, and NPM does not concern itself with issues relating to the promotion of democracy.\textsuperscript{67} And for many, politics has assumed an ever-greater role over the expertise of bureaucracies by systematically seeking to diminish the autonomy and authority of the bureaucratic
instrument. While devolution, decentralization, and contracting-out, provide citizens with new possibilities to exercise choice and voice, “they also create new problems and unanticipated consequences for democracy.”

An explicit criticism against NPM, is the old public administration preserves equality and fairness. For example, in the management of many government agencies, equity is more important than efficiency. Rather than maximizing the political values of participation and responsiveness, New Public Management concerns itself more with cost-effectiveness, and with seeking to establish accountable units of management. Moreover, decisions affecting the reorganization of bureaucracies involve choices that, in one way or another, redistribute resources, and impose burdens on one segment (or class) of society.

In addition, bureaucracies do what they do for a reason, since they are constraint driven rather than goal driven. “Few, if any, of the rules producing this complexity would have been generated by the bureaucracy if left to its own devices.” Therefore, “One cannot explain the behavior of government bureaucracies simply by reference to the fact that they are bureaucracies; the central fact is that they are government bureaucracies.” The rules or standard operating procedures, which are, in fact, political more than they are pragmatic in nature, leads managers within bureaucracies to be constraint-orientated rather than task-orientated. Moreover, these constraints, which are often given to ensure fairness, are the creation of legislatures, and their committees, the very ones that most often criticize the bureaucracy. In California, these constraints are present in the State Civil Service Act of 1937.

In the case of Caltrans, the New Public Management reforms involve three broad categories of reforms - decentralization, flattening the hierarchy, and privatization. The notion of decentralization splits the authority from the center to the periphery in both a managerial, and in a territorial sense. In a managerial sense, this usually involves forming new service agencies. In the case of Caltrans, this is the creation of the Project Management Division. The flattening of the hierarchy refers to the dispersal of managerial authority, or providing increased autonomy for local managers. The concept of privatization (or contracting-out), involves strengthening the managerial capacity of public sector organizations, or the reduction of government services.
Flattening of the Hierarchy

One major structural change in the reinvention literature is the flattening of the hierarchy. Innovators criticize as inefficient and counterproductive the hyper rational division of labor inherent in bureaucratic organizations. Instead, they advocate the merging of high-level workers with the lower-level workers that actually implement results. This requires an emphasis on team production as a reaction against the ills of vertical administration, which is reminiscent of the archaic Fordist method of assembly-line production.80 “In a world of rapid change, technological revolution, global economic competition, demassified markets, an educated work force, top-down monopolies are simply too slow, too unresponsive, and too incapable of change or innovation.”81

However, the primary impact of flattening the hierarchy is on the employees within bureaucracies. For flattening of the hierarchy involves a radical change to the roles of bureaucrats. For instance, under New Public Management, which makes managers accountable by giving them control over human resources that traditionally report within the hierarchical command and control structure, results in a fragmentation of purpose between the agency and its employees. This, in turn, undermines the notion of equitable treatment and tenure between the employee and the organization.82 Moreover, and forming the basis of later discussion, “A bureaucratic culture which is predicated on a shared set of values and goals and a centralized and hierarchical decision-making system may not be easily reformed and will certainly be vigorously defended.”83

Decentralization

Another important political development of recent decades is the widespread move towards the greater decentralization of government.84 In the New Public Management literature, decentralization is a cure for the cumbersome decision-making at the center, a means of achieving greater popular participation by empowering local communities, and more effective way of delivering services.85 This is because democracy, as a historical process, creates pressures for the extension of democratic rule to subnational jurisdictions.86 That is to say, in the end, the local and regional self-governing units are the
truly democratic ones. "Since citizen preferences vary across jurisdictions, decentralization enhances welfare by more closely matching government output to local tastes and increasing efficiency both in providing government services and in raising revenue." 

As an organizational form, some commentators conclude that a centralized administrative culture decreases opportunities for decentralized, participative, or team-based change strategies. As a rebuttal, there is also the supposition that skilled administrators will have a greater impact on the whole system if they remain at the center. “If they are transferred to regional or local governments, as the logic of decentralization requires, their impact is correspondingly less.” Moreover, functional decentralization usually means the creation of new roles and responsibilities. The assumption that these changes will necessarily bring about higher morale and more productivity is not self-evident.

Moreover, decentralization is not necessarily better for democracy. The transfer of power from center to a locality may have serious repercussions for the social fabric of the state. This is because centralized control over resources permits administrators to equalize the distribution of goods and services across a region on the basis of need. Therefore, “if a society places an emphasis on the redistribution of wealth, on planning in the interests of equity, on permitting the state to play a significant role in capital accumulation or in maximizing economies of scale, then centralization may be the preferable option.”

Since California is such a large state, this necessitates the division of Caltrans into thirteen territorial districts, with a main headquarters office in Sacramento. Before the introduction of decentralization, in a typical hierarchical command and control arrangement, each district reported to headquarters, but not really very much to each other. As a part of the decentralizing effort, more decision-making authority was granted to the districts, whereby seven of the districts were combined into two service (or cost) centers. They were granted a high degree of autonomy from headquarters, and especially with regards to project management functions. For instance, in February 1996, the Caltrans Director approved the decentralization of capital outlay support activities such as right-of-way, environmental, design, construction and miscellaneous engineering support into a North Region
consisting of Districts 1, 2, and 3; and a Central Region consisting of Districts 5, 6, 9, and 10. The remaining districts were not decentralized. The reason is they were already in a de facto sense decentralized, being parts of larger regional transportation agencies. For example, the Southern California Association of Governments encompasses Districts 7, 8, 12, and 13.

Privatization

Privatization programs, another important element of NPM policies, have appeared on government agendas across the world in the last two decades. It involves a wide range of policies designed to reduce the scope, limit the functions, and generally weaken the influence of the public sector. “The attempt to substitute the norms of the market for those of a collective interest is as much a philosophy and normative issue as it is one of institutional efficiency.” To the advocates of privatization, the role of government is to steer, and not to row. “Delivering services – whether repairing streets or operating an airline - is rowing, and government is not very good at rowing.” Therefore, privatization is a pragmatic policy for restoring government to its fundamental role, steering, while relying on the private sector to do the rowing.

To Weber, the discipline of officialdom with its precise obedience, and habitual activity is present in public as well as in private organizations. And, “Normally, the very large, modern capitalistic enterprises are themselves unequalled models of strict bureaucratic organization.” In support of NPM, “Only the expert knowledge of private economic interest groups in the field of ‘business’ is superior to the expert knowledge of the bureaucracy.”

However, is it valid to compare the benefits of contracting-out in private enterprises against the disadvantages of in-house work in public agencies? For instance, a government agency is usually a monopoly provider of some service, and is supported by a legislative appropriation that is paid for by taxes from citizens who may or may not benefit from that service. It is not appropriate to evaluate an organization with unwilling customers, and with the exclusive right to serve such customers, without knowing how many customers they attract. While the economic market distributes goods and services
on the basis of the willingness to pay, the political market distributes them on the basis of the law and politics. Which system produces the fairest outcomes is not always obvious. In addition, government agencies have general, vague, or inconsistent goals. Various critics note that constraint driven management may be the enemy of goal-orientated management. Therefore, to evaluate the efficiency of a government agency, one must decide which constraints one is willing to sacrifice.

In the case of Caltrans, a fundamental theme that has permeated through all of the dialogue surrounding its reorganization, in the model of NPM, has been the issue of contracting-out of design services. Private consulting firms such as Bechtel, CH2M-HILL, and SRI International have completed a multitude of studies. For example:

SRI International, a renowned Bay Area auditing firm, released what some analysts called a ‘scathing’ management audit of Caltrans. SRI put forth 14 key recommendations for change, including the enhanced use of private sector engineers in Caltrans' design operations. The audit further warned that Caltrans was beset with efficiency problems and called for the creation of a system of discipline and rewards to improve employee productivity.

From the above quote, we can see that agencies, or functions within agencies, which have easily assessed outcomes – that is, production and craft – are more readily brought under external control than those that have uncertain outcomes. In Caltrans, this relates to the design operations, and the environmental services. The environmental process being more constraint driven, and procedural by nature, is under no pressure to leave the agency. While the design functions, which approximates work in production agencies, is put under pressure for privatization.

**Crisis and Institutional Change**

We should not be surprised that bureaucracies resist change, because organizations, by design, are the enemies of change. In fact, they are supposed to resist it. The reason for the creation of bureaucracies is to replace uncertain outcomes with the stability and routine or organized relationships. The standard operating procedures are not the enemy of an organization; they are the essence of an organization. Stability and routine are especially important in government agencies where the demands for equity are an important. The resistance to change is even stronger when the members of an organization have a
strong sense of a mission. Furthermore, “the longer an agency exists the more likely its core tasks will be defined in ways that minimize the costs to the operators performing them, and thus in ways that maximize the costs of changing them.”

According to historical institutionalists, change is infrequent, and is primarily the result of a crisis. Afterwards, there follows a period of no change, when the new organizational structure becomes frozen, which then constrains future change. Johan Olsen illustrates this point:

In order to change routines embedded in organizational networks there has to be a performance crisis, which attracts widespread attention and deviates from the experience of large proportions of the participants and on-lookers. A performance crisis may result from a sudden raise in aspirations as well as a decline in performance.

There are many reasons given for administrative reform: a fiscal crisis, declining tax revenues, higher taxes, and perceived governmental waste. In Caltrans, reminiscent of the first Hoover Commission (1949), and the Second Hoover Commission (1955), the performance crisis (whether real or contrived) first became apparent in September 30, 1987 during a hearing of the Assembly Transportation Commission and Little Hoover Commission regarding project delays. Minutes from the hearing read, “Caltrans should look to other organizations for new project management techniques to reduce project development and delivery lag times.” In January of 1989, the Director of Caltrans communicated through an executive staff decision that, “Caltrans will implement project management.”

The Project Management Organization

To many, whether in government or the private sector, the real world no longer functions on the basis of hierarchical authority. Rather, it functions on the basis of relationships that look more like webs than hierarchies. Because these relationships tend to cross organizational boundaries, many government agencies can no longer fully deal with important problems. In short, “Command and control are not the appropriate administrative approach in the world of network relationships that increasingly exist.”

A component of the New Public Management is the concept of the project management organization. The idea is a results-oriented system of government management, through a streamlined
process of decision-making. The design allows greater autonomy, and responsibility for the field or program manager. Essentially, it eliminates the old, traditional bureaucratic model, and introduces private-sector management practices in the public sector.\textsuperscript{124}

Project management is more than a discipline; rather it is an organizational form to organize projects around one person, the project manager, who is the responsible person and advocate for the project. The Legislative Analyst’s Office describes project management in its report of the 2000-01 Budget:

Project management, a style of managing projects in which one individual is held accountable for the project from start to finish, is widely recognized both in private and public sectors as the preferred way of delivering transportation projects. The key ingredient in project management is accountability; typically, a single manager is held accountable for the cost and schedule of a project.\textsuperscript{125}

By definition, a project is a temporary endeavor undertaken to create a unique product or service.\textsuperscript{126} In Caltrans, a project typically involves the maintenance and construction of roads, although, there has been progress in recent years to expanding to alternative modes of transportation. The crux of project management is that projects are part of an organization larger than the project itself, due to the fact that the organization influences the project. That is because the structure of the organization can constrain the availability of resources for a project.\textsuperscript{127}

In project management, the organizational structure predicts the extent to which top management is willing to delegate authority to the project manager. The authority continuum spans a spectrum of possible organizational forms from the functional organization to the projectized organization. The classic organizational structure (i.e. Caltrans’ historical structure) is the functional organization. In this case, staff are grouped by specialty, and report to one clear superior. In functional organizations, the perceived scope of the project is limited to the task or specialty that a functional unit performs at a particular stage in the development of a project.

One of the difficulties with the functional structure in a multiple project environment, is conflicts can arise over the relative priority of projects that are in competition for limited resources. Project members place more emphasis on their functional specialty to the detriment of the overall project.
Moreover, they are not motivated to do otherwise, since their career paths lie in the functional organization. In a large, complex organizations, employees tend to value means over ends. That is, they worry more about following the right rule or procedure than about achieving the ultimate goal of project completion. Merton calls this ‘goal displacement,’ a process by which employees place instrumental values higher than terminal values.\textsuperscript{128}

At the opposite end of the spectrum, is the projectized organization. This requires the formation of collocated teams with their sole responsibility to work on one project. In this organizational structure, the project manager has total authority over the project. She retains the flexibility to acquire resources needed for the project from either within or outside the parent organization, subject only to the time, cost, and performance constraints.

In the middle is the matrix organization, which is a blend of the functional and the projectized organization. The matrix organization maintains the same vertical lines of authority present in the functional organization, but also establishes an additional horizontal structure, which represents the project management organization. It usually is at the middle management level for the stated purpose of interacting with ease with all of the functional units working on a project.

A drawback of this type of relationship is staff working on projects end up having two bosses. For example, the day-to-day line of authority is vertical to the functional manager, while for work assignment and control; the reporting line is horizontal to the project manager.\textsuperscript{129} The higher up in the hierarchy the project manager reports, the more physically separated the project team members are from their functional organizations, and the stronger is the matrix structure.\textsuperscript{130} Nevertheless, an internal contradiction creeps into this type of prescription, “because managers are simultaneously encouraged to take more responsibility for the results of their activity and obliged to surrender significant shares of the authority for achieving those results to third-party implementers.”\textsuperscript{131}
The New Institutional Model

If we have formal rule change without any accompanying change in work practices, then we have formal institutional change without actual institutional change. The interest of this section of the paper is to trace the proximate chains of causation to determine whether changes in formal institutions (i.e. laws or conventions) led to actual changes in Caltrans. What is termed as the joint belief shift mechanism, generates the expectation that legal change following an exogenous shock will not be sufficient to effect institutional change. If the joint belief shift mechanism functions as expected, institutions will not break down merely because they are under pressure from coalitions empowered by an exogenous shock to change the relevant laws.

An institutional perspective suggests that the possibilities for arbitrary institutional change are constrained by earlier choices and institutional history. The approach of the new institutional model is to consider the historical experiences of institutions in their rules and organizing logic, and how particular organizational forms and procedures become embedded, and the consequences this has on the ability of the organization to make decisions. The decision-making process is, therefore, less dependent on who governs, than on the implications of “vesting intelligence, morals, and authority in institutional principles, procedures, and structures.” To Weber, rationality is the genesis of an institution, however, by making actions predictable, choices and decisions can become constrained inside an institutional framework that also limits alternatives.

One fundamental question we can ask of institutional behavior is, “How do we account for the fact that strategically orientated agents chronically reproduce an acquiescence to social structures that are not in their best interest?” Government leaders can mandate or suggest changes to institutions, but the results achieved tend to substantiate the fact that their ability to control the decision-making process of the institution is constrained or bounded by an institutional sense of reality that transcends preference of politicians. The new institutional model breaks this sense of bounded rationality into some interesting corollaries, which are: isomorphism and the organizational structure, networks and path dependency,
sedimentation and culture, the buffering of performance, loose coupling of the governance system, and standard operating procedures and garbage cans.

**Isomorphism and the Organizational Structure**

The new institutional model theorizes that the adoption of structures in the formative stage of an institution become frozen over time, and a type of institutional inertia takes over discouraging arbitrary change. This phenomenon is known as isomorphism or “how groups develop shared beliefs, structures, practices, and network relations affects institutional behavior.”139 “As March and Olson note with respect to political institutions, “The long-run development of political institutions is less a product of intentions, plans, and consistent decisions than incremental adaptation to changing problems with available solutions within gradually evolving structures of meaning.”140

To Weber, the bureaucrats “have a common interest is seeing that the mechanism continues its functions and that the societal exercised authority carries on.”141 For example, Bismarck attempted to restructure his bureaucratic apparatus, however, upon his retirement, he was surprised to discover that the bureaucratic machine continued to function more or less had it had always done.142 The explanation for this is, in part, because the rewards to the bureaucrats who staff these agencies are not profits, but salaries. Therefore, the goals that these technocrats move towards are the assertion and maintenance of their own managerial autonomy.143 “This phenomenon is extremely important, given that reform must be seen in terms of interests (purchasing power, qualification, prestige, status) by those who are going to put the reforms in place.”144

Because Caltrans begins its institutional existence in 1895, it is by definition an old institution with its roots, for all practical purposes, in a different historical epoch. Early organizational theorists espoused the idea of scientific management in formulating bureaucratic hierarchies. They saw “the division of tasks in vertical hierarchy structures as the most effective and efficient type of organization.”145 The organizational type that Caltrans employed early in its formative period is an example of scientific management. However, in responding to the environment, organizations create an
environment that supports its traditional isomorphic tendencies. This is evident in Caltrans eventual
decision to adopt the hybrid matrix organization over the projectized organization to replace the purely
functional organization. Recall, the matrix organization creates a flattened project management layer
amidst an unchanging (and unchallenged) vertical lines of authority in the functional units. It also does
not delegate any formal authority to the project manager, because the project manager has a mid-level
status in the vertical hierarchy. Most organizational theorists “feel that any lack of clear-cut, single line
of authority will result in a clear case of managerial ineffectiveness.”146 The decision to choose the
matrix organization in the eyes of the new institutional theorists is a predictable result of institutional
inertia, and isomorphism, which discourages change. The California Legislative Analyst’s Office
substantiates this observation in its analysis of the 2000-01 budget:

> Caltrans project managers typically do not have authority over the staff that conducts work on
> various critical aspects of the projects (for example, environmental reviews of right of way
> acquisitions). Thus, the ability of a project manager to deliver a project depends on the
> performance of staff over which he or she has little substantial leverage.147

To Kettl, if government (at all levels – federal, state, and local) retreats back to the ineffectual traditional
hierarchical management strategies, they will only undermine the effectiveness of public programs and
diminish the government’s ability to preserve important norms like responsiveness and equity.148

If we view authority as a zero sum game in an organization, project management did not gain
authority or take it away either. The hybrid matrix structure adds a new horizontal level in an otherwise
frozen vertical hierarchical structure. To Wilson, this is not unique. “Government agencies change all
the time, but the most common changes are add-ons: a new program is added on to existing tasks without
changing the core tasks or altering the organizational culture.”149 “Reorganizations make a difference if
they alter in an important way how resources flow to programs, how career rewards are distributed to
people, or how tasks get defined. Occasionally these things happen. More often they do not.”150

Moreover, the impositions of reforms from the outside tend to be less successful than those generated
from the inside, because reorganizations from the outside tend to reflect the very top down view of
bureaucracies.151
There are other examples of this hybrid arrangement, besides in Caltrans, when organizations are under change from NPM reforms. In the United Kingdom “centralist proposals coexist or compete with decentralist ones, NPM-type reforms with traditional legal-bureaucratic remedies.”152 The conclusion is, “This hybrid arrangement leads to a lack of clarity on mutual responsibilities and obligations and fails to give any guarantee that the right balance has been struck in the interests of good management of Community monies.”153 In the case of NPM reforms in Hong Kong, “At present, managers responsible for achieving results do not have full responsibility for the resources they consume ... [they] should be given increased responsibility for taking decisions within defined policies and budgets.”154 In a similar vein, a case study evaluating Mexico City’s NPM-based administrative reform program supports these same conclusions. For instance, “the most probable outcome of implementing NPM ideas is symbolic rather than actual change. That is, government is most likely to implement reengineering teams but to render them ineffective by retaining the existing vertical and authoritarian structure and culture.”155

**Networks and Path Dependency**

The process of developing and deploying economic ideas is neither instantaneous nor simple, especially in an environment where an existing set of ideas become cognitively locked.156 To the historical institutionalists, actors who benefit from a given set of institutions and policies tend to rally around the status quo, reinforcing a path-dependent process, characterized by increasing returns.157 That is, those who benefit from a policy legacy become its natural defenders. They often form the core of a powerful interest-driven coalition opposed to far-reaching change. “Such coalitions can include citizens and interest groups that benefit from policy streams [i.e. CELSOC], as well as civil servants [i.e. PECG] who wield authority and resources in a particular issue-area.”158

However, the situation becomes even more problematic, because historical-institutionalists find that once ideas are institutionally embedded, they can become independent of the agents who originally deployed them.159 Early decisions in an institution’s hierarchy not only freeze institutional structures, they also lock-in rational behavior in a fixed institutional environment.160 Structures create
communication networks that facilitate or constrain actions, and sub-optimal solutions can persist because institutions analyze problems in a particular framework, thus, solutions become path dependent.

**Divided Government and Path Dependency**

Divided government both introduces, and reinforces a path dependent process. In the case of NPM, the centralized majority government in New Zealand was able to push through a radical reform program. On the other hand, the United States government has repeatedly tried to implement radical administrative reform, but these efforts were mostly doomed to fail in its fragmented system built on checks and balances. In addition, decentralized states provide a multitude of targets at the base to facilitate or impede change. Moreover, a state where federalism exists provides a special incentive for special interests to shift their venues to an array of different political institutions.

However, in the context of value-driven issues, defenders of the status quo have a powerful rhetorical tool at their disposal. In legislative arena, they can invoke the democratic legitimacy of the status quo in their opposition to more radical change. “Because democratic struggles over constitutions and their interpretation drive the institutionalization of particular values, supporters of those values can subsequently invoke both constitutional precedent and its democratic legitimacy.” This goes against the thinking of Weber who believed “constitutionalism binds the bureaucracy and the ruler into a community of interests against the desires of party chiefs for power in the parliamentary bodies.”

For the most part, California resembles a nation-state in its own right. For instance, if one separates California from the United States, the State's $1.4 trillion economy ranks fifth in world. In addition, like the Federal Government, California is a decentralized state, with many layers of government, complete with several layers of checks and balances. As a result, this has provided an incentive, and a mechanism, for PECG and CELSOC to continually shift venues in order to thwart changes that are not in their best interests. For example, PECG and CELSOC readily change venues on an as-needed basis between the legislative, judicial, and executive branches of government. In the United States, where courts have great authority and access to them is relatively easy, this enhances the power of
the courts over bureaucratic process (or vice versa). In addition, with California’s ballot initiative process, this provides yet another venue for both sides to press their interests.

“In a federal system, however, conflicts can be prolonged for a very long time as switches in venue make it very difficult for one opposing movement to vanquish the other.” In the case of PECG and CELSOC, this has certainly been the situation. The decentralized institutional arrangements in California contribute to the adversarial nature of bureaucratic politics, where the contestation of policies is on a continual basis. A legislative coalition, which enacts one program, can quickly supplant another coalition that influences the implementation of that policy, and so on.

**Sedimentation and Culture**

The new institutional model supposes that institutions take a particular shape in the formative phase in order to pick the best strategy for goal-attainment based on the resources and constraints existing at the time. However, the initial factors present in the environment no longer exist, but the organization’s culture and way of doing business “survive as institutional residues of past organizational options.” This perspective suggests that the formative years of an agency are of crucial importance in determining its behavior. In fact, all bureaucracies, in time, acquire a distinct personality or culture that will shape the attitudes of people who join these organizations. Culture is to an organization what personality is to an individual. Like human culture, it passes from one generation to the next, and if it changes at all - it changes slowly. And, when that culture is a source of pride and commitment, the agency has acquired a sense of mission. Weber echoes this sentiment in that, “The individual bureaucrat is thus forged to the community of all the functionaries who are integrated into the mechanism. They have a common interest in seeing that the mechanism continues its functions and that the societal exercised authority carries on.”

In a final report to the Legislature in 1996, CH2M-HILL made light of this observation by concluding that the major barrier to the success of project management in Caltrans is an unreceptive bureaucratic culture.
The significant culture change required from functional managers in determining resource needs by project, and in accepting the Project Managers’ leadership role; the ingrained bureaucratic cultural resistance to a flattened organizational structure centered on project delivery by Project Managers; and the culture change necessary at Caltrans to eliminate micro management of individual projects by Headquarters.176

The Stanford Research Institute in their reporting on Caltrans’ implementation efforts make a similar comment. “We believe this is a plan that Caltrans is implementing although it is a culture change that could take a generation of new program and project manager leadership to complete its implementation.”177 There are, of course, other organizational examples. For instance, “Even after the reorganization that produced the Postal Service, some of these constraints on the postmaster general remained in ways that impeded the creation of a culture appropriate to achieving the organization’s goals.”178

Buffering Performance

Institutional inertia and the resistance to change can manifest itself in many forms, including a strategic adaptation to the environment. Advocates of new institutional model focus on what they term as the window-dressing activities of organizations. This occurs when institutions put more emphasis on appearances than the realities of the task environment.179 For example, in the Canadian Public Service, “Many managers saw the use of private-sector management techniques as a fashionable way of dressing up existing practices as opposed to actually changing those.”180 Thus, an alternative for the old order is to modify the environment by manipulating the criteria for performance.181

If the structure of an organization is not related in a rational sense to the task environment, then advocates of the old order have some latitude with the strategic choice of alternatives. In Caltrans, “Workload determination, budget preparation, and performance measurements are an integral part of the mandated management process.”182 Caltrans has negotiated with the Legislature that it will deliver ninety percent of projects planned, and one hundred percent of funds allocated for any given year.183 The LAO commented in its analysis of the 2001-02 budget:

Caltrans adjusts its delivery targets during the year to incorporate schedule changes. For instance, if the department receives a schedule extension from the California Transportation Commission for
a project that was originally programmed for delivery in 1999-00, it deletes this project from its baseline for what was “planned” for that year. Delivery is thus measured against a smaller number of projects planned for delivery. In this way, Caltrans delivery reports mask the impact that schedule extensions have on its delivery record for the year. For this reason, we have chosen to use “programmed projects” as our baseline.\textsuperscript{184}

Another way Caltrans buffers performance is by augmenting its project delivery plan with unplanned projects, and then including them into a new baseline. The LAO states:

\begin{quote}
We support the department’s practice of advancing projects ahead of schedule when possible. However, we do not include these projects in our main calculations because the Legislature’s primary concern has been how well Caltrans meets its \textit{intended} delivery schedule, which reflects in large part its original priority of projects.\textsuperscript{185}
\end{quote}

According to Weber, every bureaucracy seeks to increase its superiority from the privileged knowledge it has over its own activities by keeping its knowledge and intentions secret. “Bureaucratic administration always tend to be an administration of ‘secret sessions:’ in so far as it can, it hides its knowledge and action from criticism.”\textsuperscript{186} Additionally, Weber states:

\begin{quote}
The concept of the ‘official secret’ is the specific invention of bureaucracy, and nothing is so fanatically defended by the bureaucracy as this attitude, which cannot be substantially justified beyond these specifically qualified areas. In facing a parliament, the bureaucracy, out of a sure power instinct, fights every attempt of the parliament to gain knowledge by means of its own experts or from interest groups.\textsuperscript{187}
\end{quote}

\section*{Loose Coupling of the Governance System}

Loose coupling in an organization occurs when its actual governing system separates from its formal structure.\textsuperscript{188} Supporters of NPM warn that institutions may on many occasions be able to establish a normative order.\textsuperscript{189} In other words, deeply rooted socialized values have a tendency to only support the present order superficially. For example, because of NPM reforms in Mexico, “Predictably, it could be expected that preference will be given to those reforms that give the appearance of change without jeopardizing politicians’ fundamental current discretionary privileges.”\textsuperscript{190}

In Caltrans, the normative order re-establishes itself by the maintenance of the performance indicators set by the Legislature. A decision pertaining to a project’s schedule is, in theory, the prerogative of the project manager. However, conflict arises in the organization if a project has a schedule delay that can adversely affect the baseline for the current year. In these cases, a decision that
alters the schedule for a project is not made by the project manager, but is reserved by headquarters in the form of ‘Mini Project Delivery Meetings.’ It is during these meetings that projects are deleted from the baseline rather than blighting Caltrans’ record. One constant criticism of the implementation status of project management practices has been the project manager has suffered from a lack of authority to make decisions by “headquarters micro-manages (over administers) district activity to such an extent that project manager’s accountability and responsibility is diminished.”

To Weber, once they are fully established, bureaucracies are social structures that are hardest to destroy. He noted that the Russian czar was seldom able to accomplish anything that displeased his bureaucracy or hurt the power interests of the bureaucrats. In the theory of communicative action, “a social world of legitimately regulated interpersonal relations detaches itself only gradually from the diffuse background of the lifeworld.” To Habermas, an agreement can be forced upon an institution, however, what comes to pass cannot subjectively count as an agreement because true agreements rest on common convictions in normatively guided interaction.

Standard Operating Procedures and Garbage Cans

The opening up of Caltrans to the external environment from the pressure of reorganization around project management, and the pressure to live up to the performance indicators, and the threat of open competition with the private sector, have in a cumulative sense created a “disruption to its embedded routines and procedures.” Garbage can models of organizational choice become prevalent when organizations lose their identity caused by an open structure, or they misplace their standard operating procedures. In this type of environment, decision-making process is more of a consequence of “things being connected by their simultaneous presence or arrival rather than by assessments of their importance.” Garbage can models suggest more of a temporal order rather than an instrumental order, where the embodiment of intelligence is in standard operating procedures.

In the case study of Caltrans, this occurs by the ad hoc decision-making process in its efforts to meet the performance criteria. This then invites criticism from the Legislature, and a reaction in the form
of ad hoc policymaking in order to live up to the Legislature’s expectations. It is a process of reaction and counter reaction, rather than a well thought out strategy or a rational cognitive process. That is to say, the manipulation of the performance indicators by deleting planned projects, and inserting unplanned projects solely for the purpose of meeting the performance criteria, without any perceived regard to the relative merits of the projects being substituted shows a lack of instrumental direction.

To Weber, if the official’s work is interrupted, the result is chaos, and it is difficult to improvise replacements from the outside society who are fit to master such chaos. Capitalism depends more and more on the correct functioning of the bureaucratic organization, and “the idea of eliminating these organizations becomes more and more utopian.” To Habermas, disturbances that occur to cultural reproduction, result in a loss of meaning and legitimization, and a corresponding orientation crisis. “In such cases, the actors’ cultural stock of knowledge can no longer cover the need for mutual understanding that arises with new situations. The interpretive schemes accepted as valid fail, and the resource ‘meaning’ becomes scarce.”

Conclusion

So to answer the first question as to whether bureaucracies remain committed to Weber’s bureaucratic ideals when they are under change, the answer is clearly - yes. Whether or not this is an enlightened decision, however, is debatable. This paper finds that bureaucratic resistance to change is a product of rational self-interest, and an irrational response based on historical legacies. The new institutional model provides a effective tool for capturing these phenomena. This paper also demonstrates that it is difficult to change the old traditional public administration. However, embedded within this old form are the rules, and a way of acting that, in effect, preserves equity and equality in the distribution of services and programs.

To reply to the second question, as whether it is possible, or even desirable, for elected official to control their bureaucracies from the standpoint of equality and representation, the answer is less than clear. In the case of Caltrans, the Governor and Legislature’s attempts to change the bureaucracy in line
with New Public Management met an unyielding resistance by the engineers, and their trade union – PECG. Whether the NPM reforms encourage citizen participation and involvement, which are generally thought to be beneficial to democracy is dubious, since the primary concern of NPM policies is efficiency and effectiveness. Moreover, the fragmentation and decentralization of authority in many NPM programs makes the formation of civic capital difficult. Additionally, NPM policies have the tendency to privatize the more lucrative or the production type of activities where minimal constraints exist, while leaving to government the more complex procedural types of activities. All the same, centralized bureaucracies are by nature inflexible and slow to innovate, which, in turn, makes citizen mobilization difficult, and this too is detrimental to democracy.

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