

Boston's "Big Dig": A Socio-Historical and Political Analysis of Malfeasance and Official Deviance

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In 1980, a Special Commission Concerning State and County Buildings (known as the "Ward Commission") filed a Final Report on corruption in the awarding of state and county construction projects in the Commonwealth of Massachusetts and found that: 1) Corruption was a way of life in Massachusetts; 2) Sub-standard construction was the norm; and 3) Political influence, not professional performance, was the prime criterion for doing business in the Commonwealth (Ward Commission 1980:3). While some of the Ward Commission's recommendations were enacted into law, many important recommendations, especially the elimination of the filed sub-bid system and campaign finance reform, were not enacted.

Now completed, the cost of Boston's "Big Dig" has ballooned to almost \$15 billion (Allen and Murphy 2007, B1). In September 1983, this 7.5 mile highway project was originally proposed for a cost of \$2.2 billion and with a completion date of 1995.

The purpose of this paper is to analyze how the failure of Massachusetts governmental officials to implement the recommendations of the Ward Commission, and their promotion of a culture of malfeasance and political corruption, has resulted in the most costly and sub-standard public works project in the history of the United States.

I. Political Corruption: Definitions and Explanations

In 1939, Edwin Sutherland (1940; 1949) gave his Presidential Address before the American Sociological Society and introduced the concept of white-collar crime that emphasized corporate crime. Over the years, there has been much conceptual and definitional debate among scholars on this subject. Friedrich (2002, 245; 1996) calls for the "recognition of cognate, hybrid and marginal forms of white-collar crime, including: governmental crime [political corruption], state-corporate crime, finance crime, techno-crime, enterprise crime ..."

Political corruption is a widely encompassing term. "What may be corrupt to one citizen, scholar, or public official is 'just politics' to another or 'indiscretion' to a third." (Peters and Welch 1978, 974). Therefore, defining political corruption or official deviance becomes a difficult task. Peters and Welch propose that there are three main societal definitions of political corruption. The first, and most narrow definition, was proffered by Nye (1967, 416) and his legalistic definition states political corruption is:

... behavior which deviates from the formal duties of a public role because of private-regarding (personal, close family, private clique), pecuniary or status gains, or violates rules against the exercises or certain types of private-regarding influence. This includes such behavior as bribery (use of reward to pervert the judgment of a person in a position of trust), nepotism, (bestowal of patronage for reasons of ascriptive relationships rather than merit), and misappropriation (illegal appropriation of public resources for private-regarding use).

This definition, although easy to operationalize, becomes ambiguous when allegedly corrupt behavior does not violate an official statute but rather goes against what is considered the appropriate way one should act in their official position (i.e. removing Assistant U.S. Attorney Generals based upon their political party affiliation or party loyalty).

A second definition of political corruption focuses on the public interest. When a political system is viewed as working for the common good, a political corrupt act is one that favors special interest over public interest. Rogow and Laswell (1966, 132-133) argue that in a society that “exalts common interest over special interest,” any violation of the common interest for personal advantage constitutes political corruption. Coleman (2006, 35-36) asserts that our elected officials are one of the most serious threats to democratic rule because they aid the advancement of legislation that affects both their own personal finances and political power. Supporting this thesis, he cites a study by the Center for Public Integrity that found that:

... one in five state legislators sat on committees that regulated their professional and business interests, and that at least 18% had financial ties to businesses and organizations that lobby state government.

This definition can be difficult to accept because how does one define what acts are in the public good or interest. Some corrupt acts, under this definition, may be justified by claiming it is for the “public good.” (Dovi 2005; Walzer 1974). An official act such as fixing an illegal alien’s papers so the alien can stay in the country because his labor is needed might fall under this definition.

A third approach in defining political corruption relies on public opinion. By this definition, a political act is corrupt when the weight of public opinion determines it so. Heidenheimer (1970, 26-28) uses this definition to contend that consensus or the lack thereof between the public and public officials on a certain act being corrupt creates a scale on which corrupt acts can be measured. He defines “black corruption” as acts that both the public and public officials judge as corrupt and therefore warrant laws or sanctions (i.e. narcotics trafficking). Acts that both parties view as corrupt, but do not believe warrant sanctions, are called “white corruption” (i.e. fixing a parking ticket). The most potentially harmful classification of corrupt acts is what Heidenheimer calls “gray corruption” (i.e. political, military and economic support for repressive regimes or to support the fall of repressive regimes). These are acts that one group wants sanctioned, but another group either does not want sanctions or is ambivalent about said acts.

This third definition, and more importantly those acts that fall in the “gray” area, tells us much about the nature and practice of the political system. The political consciousness of U.S. citizens has mainly been concerned with conventional forms of political corruption to the exclusion of the broader, supra-legal notions of political ethics. The most heinous and reprehensible crimes frequently fall into the “grey” area. However, a society’s “juridical defense,” the “social mechanisms that regulate this disciplining of moral sense” (Mosca 1939, 126), is rarely shocked. Some might argue that political elites control information about these “grey” acts and therefore society can not properly judge them. On the other hand, maybe society does not want to be forced to the realization that their democratic government can commit acts that are wholly undemocratic.

While the first two definitions of political corruption focus on the processes, justifications and motivations of politically corrupt acts, the third calls on social scientists as well as the public to help determine what are corrupt acts. The question then becomes how do we define what is corrupt and what is not? There must be a difference between cheating on an expense voucher, using an official vehicle for private use, hiring family members for government positions, embezzling campaign contributions and exerting pressure on other government agencies for political gain and/or political protection. All of these acts are corrupt, yet it seems clear that some are more corrupt than others. These differences highlight the diversity and complexity that social scientists face when examining political corruption.

If reaching an acceptable definition of political corruption seems difficult, finding explanations for said acts are even more arduous. Meier and Holbrook (1992) separate explanations or theories of political corruption into four categories: historical/cultural, political, structural and bureaucratic. Historical/cultural explanations of political corruption are common in U.S. politics. Explanations in this category argue that, “urbanism fosters conditions conducive to corruption” (Meier and Holbrook 1992, 138). As U.S. cities grew, political machines were put into place to help those that supported the machine. Corruption was then used to compensate those that operated the machines. Cultural arguments focus on the idea of a cultural flaw. This explanation argues that our political system looks highly on

personal loyalty, private gain and favors. These arguments purport that the weakness of individuals in an inherently corrupt system leads to corruption.

The political explanation of corruption has been furthered most by Rose-Ackerman (1978). She states that “politicians may sell their votes on certain issues if they are either very confident of reelection or practically certain to be defeated” (Rose-Ackerman 1978, 213). Further, she argues that an informed electorate and a system that produces close elections will limit corruption through competition (Rose-Ackerman, 1978, 213). Evidence has shown that corruption will lower a candidate’s number of votes. If candidates are in a tight race and they have some belief that their corruption will be exposed, then they are very unlikely to follow through as it may cost them the election. In the case of Massachusetts, there are rarely tight races in the Senate or House because the Legislature has been controlled by the Democratic Party for at least the past 50 years.

Quite often when corruption is discussed it is often followed with a discussion about what structural reforms could help limit corruption. Structural explanations of official deviance argue that the fragmented U.S. political system lends itself to corruption. Fragmentation goes a long way to making individual actors within the system less visible and therefore actors can be more certain that they will not be caught. Many of these fragmented systems are in control of large sums of public funds and therefore the payoff for successfully corrupt acts is great.

The final group of explanations is bureaucratically-centered. According to Wilson (1966, 31), “men steal when there is a lot of money lying around loose and no one is watching.” The U.S. government is in control of very large sums of money on all levels and it is also very large. Therefore, the reward for corruption is high and the chance of being discovered is very low. A contrary second explanation in this category is furthered by Nas et al. (1986) who argue that as bureaucracies tend to be inert when it comes to change, corruption can be viewed as a method for causing change for the public good.

The above discussion provides a foundation for the next two sections to examine political corruption in the awarding of State building contracts in the Commonwealth of Massachusetts. Through the findings and recommendations of the Ward Commission we will examine not only how the Ward Commission chose to remedy this political corruption, but also the response by the Massachusetts Legislature to said recommendations.

II. The Ward Commission

In the Spring of 1977, two Massachusetts State Senators, Joseph DiCarlo and Ronald McKenzie, were tried and convicted of extorting money from the construction firm of McKee-Berger-Mansueto (MBM) in return for their efforts in obstructing a legislative investigation of MBM’s performance as Construction Manager at the University of Massachusetts in Boston. Although by 1978 there were five separate, ongoing investigations in Massachusetts (the Massachusetts Legislative Committee on Post Audit and Oversight, the U.S. Assistant Attorney General in Boston, the State’s Attorney General, the State Auditor, and the Governor), none of these investigations had investigative powers, the resources and the commitment and political will to conduct proper investigations.

After many failed and under-funded investigative attempts, the Massachusetts House of Representatives established the Special Commission Concerning State and County Buildings on April 6, 1978. The purpose of the Special Commission was to investigate the allegations of corruption and to make recommendations for legislative and administrative reform.

The Special Commission, known as the Ward Commission, consisted of seven members and was chaired by Amherst College President John William Ward. The Ward Commission was plagued by problems from the beginning. The Commission began work in July 1978 but was not paid until that November. In addition, Governor Edward King attempted to appoint new members to the Commission as well as trying to reduce its funding.

The Ward Commission’s Final Report was submitted to the Clerks of the House and Senate on December 31, 1980. In the awarding of design contracts for the construction of state and county buildings, the Ward Commission (1980, 3) found that:

- Corruption is a way of life in Massachusetts.
- Political influence, not professional performance.

- Shoddy work and debased standards are the norm.
- The “system” of administration is inchoate and inferior.

The first finding by the Ward Commission (1980, 4) was that for at least a decade (1968-1978), there had been a pervasive pattern of political corruption throughout Republican and Democratic administrations in the awarding of State building contracts. Corruption had become way of life in Massachusetts. These findings fall under the historical/cultural explanations of political corruption discussed earlier in this paper.

The Ward Commission (1980, 4) declared that political corruption in Massachusetts may be explained by the high tolerance level by society for these acts. Erskine (1973) argues that a majority of the population feels that most politicians are corrupt, yet they feel that corruption is a part of the political system. In a 1980 poll conducted for the Ward Commission, 71% of the Massachusetts residents polled who knew about the Ward Commission thought its work was necessary and useful. Of these 71% however, 60% thought the Ward Commission would make no difference: political corruption is the nature of Massachusetts politics (Ward Commission 1980, 4).

There is also a structural argument at work in this finding by the Ward Commission. Massachusetts has long and public history of corruption including Attorney General Edward Brooke bringing indictments against 53 individuals and 15 corporations in the 1960s. Structurally, it may be argued that the political machines of both political parties have been successful in making the public believe that corruption is just how it has to be. Furthermore, the Democrat party that has controlled the Massachusetts Legislature in the 1960s and 1970s had the unbridled power to protect themselves through the creation or non-creation of laws (and continued to do so throughout the era of the “Big Dig” to the present).

The second Ward Commission (1980, 7) finding, that political influence is the main criterion for doing business with the state, is interesting because it encompasses activities that were “legal.” The Ward Commission found that campaign contributions were often given in exchange for continued awarding of State building contracts. Although the State Designer Board (an independent agency) would recommend three architects for a project, the recommendations were then sent to the Administration’s chief patronage officer who would decide which of the three architects was a friend or possible friend of the Administration. Letters of solicitation for campaign contributions were then sent before the final decision was made. When testifying before the Special Commission, many contractors spoke not of “bribes” and “payoffs” but rather “cultivation” through “contributions” to people in positions of power.” (Ward Commission 1980, 6).

If we allow that many of these contracts were awarded through favoritism, one might surmise that the projects would be of the highest quality to avoid scrutiny and detection. (Ogus 2004, 333) However, this was not the case. In its third finding, the Ward Commission determined that State building defects and poor craftsmanship were as rampant a the problem as corruption (1980:12). The Ward Commission found that 66% of buildings survey had significant defects and 72% of buildings under the supervision of the Bureau of Building Construction had areas that were unusable due to design defect. Even more distressing, the Ward Commission (1980, 2-1) examined over 17 separate projects and determined that of the \$17.1 billion spent on construction since 1968, \$7.1 billion had been spent on projects with severe defects. The then Speaker of the Massachusetts’ House of Representatives, Thomas W. McGee, said it best:

... Let’s allow the guy got the contract because of favoritism. Let’s even allow the guy got the contract because he paid a bribe to get it. But he did get the contract! Why can’t he build a building which stands up, a building that works? (Ward Commission 1980, 9)

The fourth major finding of the Commission, that the system of administration by the Commonwealth is at fault, supports the bureaucratic explanations of political corruption discussed earlier. State governments tend to be very decentralized and full of independent agencies and committees that are controlling, powerful, and more importantly have the “power of the purse.” The Ward Commission (1980, 13-14) found that: 1) no State official knew how many buildings the State owned or leased; 2) the historical information of individual State building contracts had to be assembled from a wide variety of sources; 3) most of these contracts (sample of 1400 studied) were incomplete, incorrect, forged or

non-existent; 4) there was no State management information system to evaluate construction projects as they relate to priorities, costs, needs, time controls, capital outlays, and the performance records of contractors. This diffusion of political authority created and promoted a diffusion of responsibility and accountability.

III. Ward Commission Recommendations

The Ward Commission made four specific recommendations. The Massachusetts Legislature's partial implementation of these recommendations was quick in some areas, made decades later in others or rejected outright.

The first recommendation was the creation of the first State Inspector General Office in the United States. (Ward Commission 1980, 7-1). This Office was to be an apolitical, professional investigative agency empowered to prevent and detect fraud, abuse, waste of public funds and political corruption. The Inspector General was to be appointed by Massachusetts Law School Deans, but the Massachusetts Legislature decided that the appointment would be based upon unanimous consent of the Governor, Attorney General and State Auditor. Over the more than twenty years in existence the Inspector General has been able, to some degree, to keep corruption in the public eye.

The second recommendation was a construction reform bill. This came to fruition a decade later in Chapter 579 of the Acts of 2000. Chapter 579 gave notice that the Inspector General's Office had oversight of all public construction projects as well as reforming the contractor selection process. This legislation was followed by the Chapter 193 of the Acts of 2004 entitled "An Act Further Regulating Public Construction in the Commonwealth." This legislation requires pre-qualification and certification of general contractors and sub-contractors by the Division of Capital Asset Management (DCAM), a professional building design and construction State agency. This legislation, at least in theory, would reduce corruption, increase the quality of construction and reduce cost overruns.

The third recommendation was campaign contribution reform. The Ward Commission (1980, 4-1) recommended that campaign contributions be limited to \$1,000 to remove the possibility of firms or individuals making large contributions to help receive a contract. In 1998, a referendum to approve the *Clean Election Law* was put before the electorate and 67% voted for this proposed, landmark legislation. In 2002, Massachusetts House of Representatives' Speaker Thomas Finneran raised over \$700,000 from corporations, according to Massachusetts *Common Cause*, to successfully repeal the voter-approved legislation.

The final recommendation was the most important. The Ward Commission (1980, 5-1) called for an immediate repeal of the filed sub-bid system (Massachusetts General Laws Chapter 149, section 44F, first passed in 1939). The Ward Commission emphatically stated that: [F]iled sub-bidding should be repealed. It is an experiment that has conclusively failed. It is the least desirable of any known alternative for the selection of sub-contractors ...Its continued use will result in the building of more defective construction at the taxpayers' expense ... [It is] the kind of law that gives government regulations and operations a bad name. (Ward Commission 1980, 7-1).

The filed sub-bid system is unique to Massachusetts and has been characterized by many, including the Ward Commission, as the main cause of public construction corruption. The filed sub-bid law requires that various parts of a project be bid-out to the 17 sub-contractor trades recognized by the State. Thus, 17 sets of plans are drawn up by the State for masonry, plumbing, electrical, etc., thus increasing the cost of designing the project. A week after the subcontractor bids are received, general contractors then submit their bids reflecting their choices of sub-contractors among the bidders. The general contractor with the lowest bid is then selected for the project. Because the general contractors have little choice but to select the lowest sub-contractor bids, this process creates an adversarial relationship between the general contractors and sub-contractors, produces significant waste of public funds, and is the major cause of defective State building construction

The Ward Commission (1980, 5-3) determined that this two-tiered system has become so politically motivated that it had protected contractors from a review process that would disqualify these contractors for their substandard performance. As an example, the Ward Commission found that 41% of building surveyed had roofing defects and although there are 450 roofing firms in Massachusetts, the filed sub-bid

system awarded 48% of all roofing projects to just three firms. They concluded that the continuation of the sub-filed bid system would guarantee further political corruption and defective State buildings.

In recommending the immediate repeal of the filed sub-bid system, the Ward Commission (1980, 5-1) called for a new procurement system whereby there is direct contract awarding to general contractors who are then responsible for the entire project, including the selection of subcontractors. The present system provided no disincentive for shoddy work, prevents the Commonwealth from securing the best possible architectural technology, and slows down the construction process down. State agencies are required to draw up accurate and complete plans that are equally divided between the 17 identified sub-contracting trades. If these plans are not entirely correct a complex and unpredictable amendment procedure is triggered.

Even with these strong recommendations, except for legislation in 2002 (Massachusetts General Laws Chapter 28) creating a 2-year pilot program authorizing six municipalities not to solicit bids from subcontractors and have the designated general contractor select its own subcontractors, no action has been taken to repeal this inherently filed sub-bid corrupt procurement system.

IV. The History and Politics of the Most Costly U.S. Public Works Project

Boston's "Big Dig" (a/k/a "Central Artery/Tunnel Project") has been a thorn in the side of the city and its commuters for over twenty years. The project's purpose was to build a 2 mile stretch of underground highway through the heart of Boston, replace the existing above-ground highway with green space, and to build a tunnel from Boston beneath the Boston Harbor to Logan International Airport in East Boston. At its height the project employed it employed over 5,000 workers. The "Big Dig" has been troubled from the start by shoddy workmanship, as evidenced by problems with sub-standard materials, paving fraud, grout heaves, leaking tunnels and defective anchor bolts in the Ted William and I-90 tunnels. Originally proposed at \$2.2 Billion, the project costs have risen to \$15 Billion, with 73% of the cost being subsidized by Massachusetts taxpayers (Murphy 2008, A1).

Planning for the "Big Dig" officially began in 1982, with environmental impact studies starting in 1983. After years of extensive lobbying for federal dollars by three Massachusetts Democrats (U.S. Senator Edward M. Kennedy, U.S. Speaker of the House of Representatives "Tip" O'Neill and Governor Michael Dukakis) a 1987 public works bill appropriating funding for the "Big Dig" was passed by U.S. Congress (controlled by the Democrats), but it was subsequently vetoed by Republican President Ronald Reagan as being too expensive. When Congress overrode his veto, Governor Michal Dukakis chose Bechtel/Parsons Brinkerhoff as both Private-Sector Manager and Design-Builder. Since the breaking ground in 1991, the "Big Dig" has been wrought with delays, huge cost overruns and accusations of political corruption and malfeasance.

By 1994, the cost of the construction had ballooned from the initial estimated cost of \$2.2. Billion to \$7.7.Billion. "Big Dig" Project Director Peter Zuk (1991-1998), the successor to Frank Salvucci who left in 1991 upon the election of Republican Governor William Weld, cavalierly responded by stating: "I knew it was in that area ... That's the floor, not the ceiling." (Palmer 1994, 1). Three years later, in an interview with National Public Radio, Director Zuk referred to the "Big Dig" as: "...just a little road project up here in Boston." In 2003, Mr. Zuk returned to Massachusetts to become a partner at Gadsby Hannah LLP. This very high-powered and politically connected Boston law firm represented Bechtel and Parsons Brinkerhoff who received an estimated \$2.2. Billion by the end of the "Big Dig" project.

This cavalier example of the attitude by the Project Director to these cost overruns is appalling and was an insult to the taxpayers of Massachusetts. But, some 9 years later Judge Edward Ginzburg received a disturbing transcript from Bechtel/Parsons Brinkerhoff during discovery in his cost recovery litigation on behalf of the Massachusetts Turnpike Authority ("MTA"). This transcript gives us some insight into the corporate culture of Bechtel/Parsons Brinkerhoff. Judge Ginzburg later shared this transcript with a Boston Globe reporter after the July 2006 tragic death of Milena Del Valle in the I-90 Connector Tunnel of the "Big Dig." From this transcript and his interview with Judge Ginzburg, Boston Globe reporter Sean Murphy (Murphy 2006, A1) wrote the following:

Ginsburg mailed a letter to Romney yesterday, along with a transcript of a 1994 meeting during which Bechtel/Parsons Brinckerhoff managers discussed the vagaries of funding for the Big Dig and the pressure to minimize its cost, prompting one manager to question whether it was wise to stay on the job.

“Is there a strategy to back ourselves out of this job? Or are we just going to continue to suck on the cow as long as it lives?” the unidentified manager asked, according to the transcript.

“You suck on the cow as long as it’s alive,” another manager replied.

“Absolutely. You’ve got a thousand people on this job,” the first manager said, according to the transcript.

To Ginsburg, the exchange illustrates Bechtel/Parsons Brinckerhoff’s willingness to “put its own welfare and profit ahead of the interests of its client, the Commonwealth and the Turnpike Authority,” he wrote in his letter.

In October 1994, Bechtel/Parsons Brinkerhof failed to depict the new Fleet Center in their design drawings, showing instead that this was “an obstacle-free area for contractors to lay utility lines. Bechtel/Parsons Brinkerhof then failed to fix the problem before signing off on the final design drawings three years later.” (Palmer 2003, 1). This cost the taxpayers an additional \$991,000 and not only did Bechtel/Parsons Brinkerhoff not pay for this mistake, neither the State nor the Federal government sought reimbursement.

In 1997, the Massachusetts Legislature abruptly transferred oversight of the “Big Dig” from the Massachusetts Highway Department to the MTA. The MTA then became an even larger patronage haven for Massachusetts legislators to reward their supporters with jobs and “no-show” jobs.

In 1998, the Massachusetts Executive Office for Administration and Finance published a report of the Construction Reform Task Force that succinctly emphasized the reasons and need for construction reform:

Massachusetts has the dubious distinction of having the most regulated public construction contracting process in the country. Massachusetts statutes override the normal rules of law governing private contracting in the area of public bidding and in many important aspects of performance of public contract, as well as the fiscal aspects of contracts with state instrumentalities and municipalities. (Gransberg 1999, 1):

In 1999, the Pioneer Institute for Public Policy Research commissioned a study on the need for construction reform in Massachusetts. Daniel D. Gransberg (1999, x), University of Oklahoma professor and retired from the U.S. Army Corps of Engineers, authored the study and raised once again the efficacy of Massachusetts General Law Chapter 149, stating that this provision:

... requires public agencies to open filed sub-contractor bids for each trade on vertical projects and furnish them to the general contractors for use in the preparation of their bids for the general contract, thus preventing the formation of strategic relationship among general contractors and sub-contractors.(Gransberg 1999, x).

The filed sub-bid law created an adversarial relationship between general contractors and sub-contractors. They are likely to have no history collaboration, loyalty or trust, and this leads to sub-contractors being inner-directed, rather than outer-directed, and adversarial toward the general contractor and the project. On the other hand, long-term relationships, where a general contractor and sub-contractors have a history of working together as a team, lower the general contractor’s risk and leads to reduced public construction costs and better quality of work.

According to Gransberg (1999, 3), the Massachusetts “Design-Bid-Build” system requires that “the designer that does feasibility study be different than the firm that does completes the final design (Bechtel/Parsons Brinkerhoff/Parsons Brinkerhoff, in the case of the “Big Dig.”). This requirement not only increases completion time for the selection of the first and second designer, but the second designer, who is charged with “ensuring that construction conforms to the *minimum level of quality* specified in the plans ... [creating] no incentive to the builder to exceed this level through good workmanship or innovative materials and processes.” (Gransberg 1999, 3). Like the Massachusetts sub-filed bid system, this companion “Design-Bid-Build” system further promotes an adversarial relationship among their Designer/Builder (Bechtel/Parsons Brinkerhoff/Parsons Brinkerhoff), contractors and sub-contractors.

Gransberg's study did not specifically address the "Big Dig," but it did compare the construction procurements systems in Massachusetts and in Indiana, Texas and Florida (which do not use the sub-filed bid system). Gransberg's study illuminates the inadequacy of the filed sub-bid law by comparing Massachusetts construction to that of Texas, Indiana and Florida. The comparison to public construction in Texas is most poignant and most comparable because Texas uses the same Design-Bid-Build procurement system as Massachusetts but does not have a filed sub-bid law.

The first category, cost growth, measured the increase in the award price and the final price. In Massachusetts the increase was 11.68%, while in Texas it was only 3.68%. The second category, time growth, measured the increase between the end date in the contract to the date that project was actually completed. Here, Massachusetts showed a 55.20% increase while Texas had an 11.60% increase. The third category, unit costs, calculated for and then normalization for local conditions such as union labor and severe winters, put Massachusetts project costs \$202 per square foot as compared \$127 per square foot for Texas. (Gransberg 1999, 16-17). These three factors demonstrate the negative effects of Massachusetts' sub-filed bid system and point to excessive change orders as well as the ineffectiveness of the Massachusetts system to deal with them. These change orders have various causes and all are closely related to the filed sub-bid law.

Recognizing that one cannot legitimately make a general comparison of other states' construction project costs to the mega "Big Dig" project, this study does affirmatively demonstrate that if sub-filed bid system significantly contributes to construction cost overruns in Massachusetts, then the huge "Big Dig" cost overruns are, at the very least in part, a product of the sub-filed bid system. Based upon Gransberg's study, the Pioneer Institute for Public Policy Research concluded that Massachusetts could save \$220 million of their \$3 billion a year construction costs by reforming its construction procurement system through the following provisions that emphasize quality, readiness and cost-effectiveness:

- Allow the use of a construction delivery method appropriate to the project.
- If specific expertise is required, contractor selection should be based on demonstrated performance and price. If saving time is a priority. The process should balance price and the promise of timely delivery.
- Create incentives for individual contractors to minimize change orders, pursue costs saving and/or deliver ahead of schedule.

(Pioneer Institute for Public Policy Research 2002, 2).

In 2003, after a yearlong investigation of the "Big Dig," the Boston Globe determined that at least \$1.1 Billion in construction costs overruns was tied to the mistakes by Bechtel/Parsons Brinkerhoff. "The investigation included scrutiny of 12,000 changes to more than 150 construction and design contracts., a review of 20,000 pages of project documents, and over 100 interviews with current and former "Big Dig" officials, construction specialist and contractors." (Lewis and Murphy 2003b, B1). The Commonwealth was unlikely to recover at least two-thirds of these costs because the statute of limitations had passed. But, despite their mistakes, Bechtel/Parsons Brinkerhoff by 2003 had received \$266 Million over the original costs of their initial contract with the Commonwealth.

As part of this year-long Boston Globe investigation, Lewis and Murphy (2003a, A1) examined the relationship between Bechtel/Parsons Brinkerhoff and State official and found that:

- that Bechtel/Parsons Brinkerhoff and State officials conspired to "hide costs to prevent a more favorable view of the Big Dig's financial picture" from the public and Federal officials;
- that Bechtel/Parsons Brinkerhoff, its sub-contractors and lobbyists contributed at least \$250,000 to the "Massachusetts congressional delegation and the state's top elected officeholders."

- that Bechtel/Parsons Brinkerhoff retained “some well-connected lawyers and lobbyists, who at the same time, worked for some of the state’s top elected officials, including two former State governors and various legislative leaders.”

In January 2003, MTA.Chairman Matthew Amorello, the successor to James Keraiotis, as Project Director of the “Big Dig” was faced with allegations that the MTA.had failed to recover costs for design errors and cost overruns by Bechtel/Parsons Brinkerhoff. He appointed retired Judge Edward Ginsburg to lead a task force on cost recovery. Judge Ginsburg filed 10 lawsuits totaling \$100 Million against Bechtel/Parsons Brinkerhoff for failing to disclose costs overruns, but his efforts were eventually thwarted by the refusal by both the MTA.and Bechtel/Parsons Brinkerhoff to produce more current documents and to cooperate in his investigation of leaking tunnels. (Murphy and Lewis 2005, 1). In what he characterized as “too cozy” of a relationship between MTA.officials and Bechtel/Parsons Brinkerhoff, Judge Ginzburg stated: “They were all married to each other.” (Murphy and Lewis 2005:1).

In September 2004, the north-bound I-93 “Big Dig” tunnel was riddled with hundreds of leaks, some 26 million gallons of water that came through the tunnel’s walls (built by Modern Continental Construction, Co.) into the drainage system that was suppose to handle only 500,000 gallons annually. (Zezima 2004, 22). Bechtel/Parsons Brinkerhoff responded with the following statement:

While the cause of the September water leak in the northbound tunnel remains under investigation it is inappropriate for us to comment on specific allegations. While water does enter the tunnels in other locations, this should not be confused with that one incident. In a tunnel of this construction type seepage is inevitable but is mitigated by proper engineering and maintenance programs, which have been planned for and are in place. The tunnel is structurally sound. (Murphy and Lewis, 2004:1).

But the leaks have not stopped because Bechtel/Parsons Brinkerhoff” rejected the standard tunnel-within-a-tunnel design (a water-tight enclosure or box) and recommended a “novel” tunnel design that had never been constructed in the United States. (Lewis 2004, 1). In 2005 and 2006, in the I-93 tunnel, there was significant flooding and over 1 million gallons a month being pumped out of the drainage system, despite the fact that the MTA’s permit issued by the Massachusetts Water Resource Authority allowed only 36,000 gallons to be pumped monthly. (Murphy 2006:B1). Since January 2007, 1.9 million gallons of water have being pumped monthly out of the drainage system. (Murphy 2007, A1). While U.S. Attorney Michael Sullivan and the U.S. Department of Transportation opened independent investigations into the tunnel leaks, no civil or criminal actions have been filed against Bechtel/Parsons Brinkerhoff or Modern Continental Construction.

In its 2004 Annual Report (published May 2005), Inspector General Gregory W. Sullivan reported that his Office had issued two reports that identified “specific management lapses by Bechtel/Parsons Brinkerhoff” that may have led to more than \$155 million in Big Dig cost increases ... and a \$146 million breach-of-contract lawsuit by the MTA claiming the Big Dig managers failed to disclose the true cost of the project to state officials in order to increase their profits.” (Office of the Inspector General 2005:9). In his report, outlining Bechtel/Parsons Brinkerhoff”’s responsibility for the project’s cost overruns, the Inspector General “detailed how state, federal and Bechtel/Parsons Brinkerhoff officials acted to conceal the true cost of the Big Dig for six years.” (Office of the Inspector General 2005, 9).

In February 2005, the Boston Globe reported survey results that found that 71% of the participants (registered voters) said that the “Big Dig” was not worth the money spent and only about 50% felt safe driving through the “Big Dig” tunnels. (Phillips 2005, B1). The following month, Jack K. Lemley, a highly respected tunnel engineer who led the Massachusetts Turnpike Authority’s investigations into the “Big Dig” tunnel leaks, said that he “can no longer say with confidence that the Big Dig is safe to drive in.” (Lewis and Murphy 2005, 1).

In March 2005, Governor Mitt Romney announced at a press conference that he had filed papers with Supreme Judicial Court of Massachusetts to remove Matthew Amorello, Chairman of the MTA, as Project Director of the “Big Dig.” At this press, Governor Romney stated:

Dealing with the Turnpike Authority over the past two years has been an incredibly frustrating experience. ... I believe the Big Dig has been mismanaged to the detriment of the public. ... The culture of obstruction and cover-up starts at the very top.

(Lewis and Murphy 2005, 1). Unfortunately, the contested legal battle was never adjudicated by the Supreme Judicial Court to determine whether Governor Romney had legal authority to remove the “Big Dig” Project Director.

In May 2006, a Federal grand jury indicted 6 individuals employed by Aggregate Industries NE, Inc, the largest asphalt and concrete supply company in New England, with defrauding the Federal government by “generating and submitting false records to the Central Artery Tunnel project (“Big Dig”) and mailing fraudulent invoices to general contractors on this government funded highway project.” (Department of Justice 2006, 1). The indictment alleges that between 1995-2005 the defendants delivered 5,000 truckloads of recycled, non-specification concrete to the “Big Dig.” This indictment was the result of an August 2005, raid by the Massachusetts State Police where they found evidence of fraudulent records that hid the poor quality of concrete delivered for highway project.

V. Tragedy, Investigations and Litigation

On July 10, 2006, at approximately 10:45 p.m., Angel Del Valle, with his wife Milena at his side, was driving to Logan International Airport through the I-90 tunnel connector to pick-up his brother. Suddenly, a 12-ton concrete ceiling panel came crashing down on his vehicle, trapping him and killing his beloved wife and mother to their three children.

Under intense pressure from Governor Mitt Romney to resign or be fired, Matthew Amorello, MTA Chairman and Project Director of the “Big Dig,” resigned. On July 16, 2006, Attorney General Thomas F. Reilly determined that 16 of the 20 anchor bolts that held that the afore-mentioned ceiling panel were loose and some bolts had no epoxy glue. The I-90 connector’s drop ceiling was:

... held up by hangers, which were suspended from bolts that had been glued to the tunnel roof. But there were no beams attaching to the walls, and the ceiling was constructed with half as many ceiling bolts as in the original design. (Monohan 2006, 1).

Attorney General Reilly charged that in the Fall 1999, five (5) ceiling bolts failed during testing, that Bechtel/Parsons Brinkerhoff/Parsons Brinkerhoff developed a plan to address the failure problem, and that his Office would investigate to determine whether the plan was ever implemented (LeBlank 2006). A Boston Globe investigation reviewed invoices from the 1999 ceiling construction job and found that: “Modern Continental Construction Co. received and apparently used at least one case of quick-drying epoxy to secure the ceiling bolts ...” (Allen and Murphy. 2007, 1). This quick-drying epoxy not only held 25% less weight than the standard epoxy, but it was not recommended for suspending heavy ceiling panels like the ones in the I-90 tunnel.

On May 8, 2009, Modern Continental pled guilty to 39 federal charges of overbilling and construction defects, but federal prosecutors dropped all charges related to the I-90 tunnel disaster. (Saltzman, 2009, A1). While Modern Continental’s criminal fines could amount to \$20 million, the company filed for bankruptcy three days after the criminal charges were filed in June 2008.

On October 12, 2006, Inspector General Gregory Sullivan (2006, 1) submitted an interim report to the Massachusetts House and Senate Chairs of the Joint Committee on Transportation that included the result of his Office’s investigation of the I-90 connector tunnel collapse. Inspector General Sullivan determined that the:

[I]nitial findings of the forensic investigation into the collapse point at least in part to a lack of maintenance of the epoxy bolt ceiling suspension system as a significant cause for the catastrophic incident on July 10, 2006.

... Document requests to MTA and EOT failed to produce a single document indicating that any regular maintenance was ever performed on the I-90 ceiling system from its construction in 1999 onward. This demonstrates an alarming lack of stewardship on the part of the MTA, which was the party primarily responsible for the infrastructure.

The National Transportation Safety Board confirmed that they have not received any records indicating that “tunnel inspections were done of the ceiling system from the time it opened to traffic to the day of the collapse.” (National Transportation Safety Board 2006, 1).

What is further remarkable and perplexing is that the Ted Williams Tunnel had similar problems as the I-90 tunnel with anchor bolt ceiling installation in its tunnel ceiling. In 1997, the National Transportation Safety Board discovered that Bechtel/Parsons Brinkerhoff directed the company to follow a design that “provides little or no redundancy “ if more than one hanger, each held up by two bolts, comes loose”. (Murphy and Allen 2006, 1) In 2003, the Inspector General issued a proposal to pursue cost recovery for a defective design specifications and poor sub-contractor performance. (Office of the Inspector General 2003, 1-5).

But, unlike The Ted Williams Tunnel ceiling construction (the under-the-harbor tunnel from Boston to Logan International Airport), Bechtel/Parsons Brinkerhoff used concrete ceiling panels in the I-90 tunnel that were cheaper, quicker to install with 40% less bolts, but more than twice as heavy as standard industry panels. (Allen and Murphy 2006, 1).

On August 30, 2006, the estate of the Milena Del Valle, her husband and three children filed a civil suit for the wrongful death of Mrs. Del Valle against Bechtel/Parsons Brinkerhoff, other “Big Dig” contractors and the MTA. To date, only Powers Fasteners, the suppliers of the epoxy anchor bolts, has settled their case in the amount of \$6 million. Massachusetts’ taxpayers could will bear a significant burden of any settlement or punitive damages award because of the malfeasance of the MTA as the ultimate overseer of the “Big Dig.” (Associated Press 2007, 1).

On November 27, 2006, Attorney General Reilly filed a civil lawsuit against Bechtel and Parsons Brinkerhoff, both individually and jointly, charging them with gross negligence and breach of contract. The complaint focused on the role of Bechtel/Parsons Brinkerhoff in the management, design, construction, installation and oversight of the epoxy bolt system that failed inside the I-90 tunnel connector, resulting in the death of Milena Del Valle. (Office of the Attorney General 2006, 1-2).

Bechtel and Parsons Brinkerhoff faced not only the potential of a huge punitive damages award in this civil trial and a mandatory discovery process that would have exposed documents that would be devastating in civil proceedings, but these discovery documents could be used by the Commonwealth in their prosecution of any criminal case on the charge of manslaughter in the death of Mrs. Del Valle. (Road & Bridges 2007, 1) Although much has been made in the press about prosecuting various companies in the death of Mrs. Del Valle, under Massachusetts law the criminal penalty for manslaughter by a corporation is only a \$1,000 fine.

On January 23, 2008, Attorney General Martha Coakley announced that Bechtel, Parsons Brinkerhoff and twenty-four other companies would not be criminally prosecuted and that these companies had agreed to settle the civil case for \$458 million (Bechtel will pay \$352 million and Parsons Brinkerhoff will pay \$47.23 million). (Office of the Attorney General 2008). According to the settlement agreement, Bechtel/Parsons Brinkerhoff admitted that they failed in fulfilling their “obligations” and will be responsible for any “catastrophic event claim” by the federal and state governments in the next 10 years related to the “Big Dig.” (Office of the Attorney General 2008, 1).

Bechtel’s 13-paragraph press release that very same day stated that: “We understand and acknowledge with this resolution that our performance did not meet our commitment to the public or our own expectations.” (Bechtel/Parsons Brinkerhoff 2008, 1). The three paragraphs were followed by a “Notes to Editors” section. Running for 2 ½ pages Bechtel blamed the MTA, other “Big Dig” contractors/sub-contractors and other circumstances for the debacle with the I-90 Connector Tunnel and the death of Mrs. Del Valle. Former MTA board member and 2006 gubernatorial candidate, Christy Mihos, summed it up: “The lesson is [you] can pay your way out of anything ... We’ve learned nothing, because the taxpayers are going to have to pick up the cost going forward.” (Ross 2008, 1) .

On June 20, 2008, the U.S. Attorney’s Office in Boston, Massachusetts filed criminal charges at Modern Continental, Corp., the largest “Big Dig” contractor, charging that they knew the bolts were coming loose in the in the I-90 tunnel. They were also charged with “systematically cheating on the bills for labor and materials...”, as well as disregarding the shoddy “shoddy concrete workmanship” that led to

the water-gushing breach” of the tunnel walls in 2004. (Murphy and Saltzman 2008, A1). The following day, Modern Continental filed for Chapter 11 protection in the U.S. Bankruptcy Court in Boston. (Associated Press 2008, 1).

VI. Discussion

Although it may seem like this mega-construction project’s myriad of problems would have been difficult to predict, yet they were predictable long before the project even began. The Ward Commission was on the mark some twenty-eight years ago with its findings and recommendations that would have saved the “Big Dig” from many of the problems it has faced. Political corruption is still a way of life in Massachusetts, where political influence, not professional performance, is still the criterion for doing business with the State. The cost overruns and the shoddy (and even deadly) work performed on this project are directly related to the corrupt, inferior filed sub-bid system. There has been no campaign finance reform and no accountability by the Commonwealth in their violation of the public’s trust in failing to faithfully oversee the “Big Dig.”

But, there are some interesting differences between the politically corrupt actions of the 1970s and those of the “Big Dig” and can be understood by the structural, bureaucratic and political explanations in the first section of this paper. Unlike the criminal convictions that spurred the creation of the Ward Commission, to date there have been no criminal indictments against any Massachusetts public officials.

The political corruption of the “Big Dig” has been more sophisticated, clandestine, and costly through the “marriage” between Bechtel/Parsons Brinkerhoff and the officials of the Commonwealth of Massachusetts. Their fiscally irresponsible and politically corrupt actions were emboldened by the fact that 60-80% of the costs were paid by the Federal government, and despite rumblings of Federal investigations, the Federal government continued to fund the “Big Dig” project. The overwhelmingly Democrat Massachusetts Legislature and Governor Michael Dukakis approved the appointment of Bechtel/Parsons Brinkerhoff as **both** the Private-Sector Manager and Designer-Builder.

This dual appointment gave Bechtel/Parsons Brinkerhoff the complete, day-to-day control of the “Big Dig” project and all the “Big Dig” Project Directors relied heavily upon their reputation, experience and expertise in designing and building this mega-project. The problem here was there was no accountability, due diligence and transparency, since Bechtel/Parsons Brinkerhoff, as the manager of the project, was allowed to unilaterally recommend, accept and approve all design changes. Therefore, it was in the financial interest of Bechtel/Parsons Brinkerhoff to both create design changes and to accept design changes from other State agencies and officials. As Wilson (1966, 31) stated: “... men steal when there is a lot of money lying around loose and no one is watching.”

In 1997, the Massachusetts Legislature abruptly transferred oversight of the “Big Dig” from the Massachusetts Highway Department to the Massachusetts Turnpike Authority (MTA). This not only gave the Massachusetts Legislature more power and influence, more patronage jobs for their supporters, and greater leverage with future Republican and Democrat Governors, but it also increased campaign contributions from the “Big Dig” contractors and other interests groups associated with the promotion of the project. To protect their own interests, Speaker of the House Thomas Finneran led the charge, fueled by \$700,000 in corporate campaign contributions, to successfully repeal in 2002 the voter-approved referendum on a *Clean Election Law*. In essence, the Massachusetts Senate, House of Representatives and the Governor’s Office abdicated their sacred responsibility to the citizens of Massachusetts by their lack of legislative and executive oversight on the “Big Dig” in exchange for their own personal finances and political power.

In 2005, Finneran, who had left the Massachusetts House of Representatives in 2004 to become the President of Massachusetts Biotechnology Council at \$416,000 annually, was indicted on three counts of perjury and one count of obstruction by the Office of the U.S. Attorney. He was charged with lying to federal investigators that he was not involved, as Speaker of the House, in a legislative redistricting plan that would have: 1) diluted the clout of minority voters in Suffolk County (Boston) districts, including the “gerrymandering” of shedding three Black neighborhoods and adding three White neighborhoods that decreased “from 74.1% minorities of voting age to 60.6%” in Speaker Finneran’s district (Lewis 2003,

A1); and 2) weakened U.S. Congressman Marty Meehan who had strongly supported the *Clean Election Law* to the dismay of Speaker Finneran.

On January 5, 2007, Finneran was facing 16 to 21 months in prison if convicted on all counts. He entered into a plea bargain with state and federal officials and pled guilty to obstruction of justice and was placed on unsupervised probation, fined \$25,000 and referred to the Massachusetts Board of Bar Overseers for disbarment proceedings. (Phillips & Shelley, 2007, A1). Having resigned as President of the of Massachusetts Biotechnology Council, Finneran became the morning drive-time host on Boston's WRKO radio station just 6 days after his conviction and continues in that capacity even after the Massachusetts Board of Bar Overseers recommended disbarment in March 2009.

But how did Bechtel/Parsons Brinkerhoff escape these billions and billions of dollars of cost overruns and shoddy and ultimately deadly, construction? The answer is "Political Clout" and one of the best examples of this is the events that took place on October 9, 2001. As recounted by a year-long investigation Boston Globe (Lewis and Murphy 2003a), the MTA Board of Directors were under fire when Bechtel/Parsons Brinkerhoff reported that costs had increased during a three-week period by \$300 million. MTA lawyers arranged a meeting for October 9th at 9:00 a.m. and 3:00 p.m. to negotiate a refund with Bechtel/Parsons Brinkerhoff. During the morning meeting, Bechtel/Parsons Brinkerhoff offered to reimburse the Commonwealth \$50 million. The parties agreed to meet for the afternoon meeting that day, but Bechtel/Parsons Brinkerhoff never returned. Instead, they met with Acting Republican Governor Jane Swift's chief of staff and her Secretary of Administration and Finance. Based upon this meeting, Bechtel/Parsons Brinkerhoff rescinded their offer to pay the \$50 million. (Lewis and Murphy 2003a, A1).

The next week, Acting Republican Governor Jane Swift fired two MTA Board members, Christy Mihos and Jordan Levy. They had been outspoken critics of Bechtel/Parsons Brinkerhoff's mismanagement of the "Big Dig" and they had voted to delay the I-90 turnpike rate hike and rely upon the reimbursement from Bechtel/Parsons Brinkerhoff. In May 2002, the Supreme Judicial Court of Massachusetts ruled that the firing were not justified. But, faced with Mihos and Jordan returning to the MTA Board, late one night the Democrat Massachusetts Legislature voted to expand the three-member MTA Board to five, allowing Governor Swift to appoint two new Board members. This gave Governor Swift majority control of the Board, thereby staling cost recovery efforts and forging a stronger "marriage" between the MTA and Bechtel/Parsons Brinkerhoff as evidenced by their **joint** refusal to cooperate with Judge Ginzburg's investigation of leaking tunnels by producing more current documents on the tunnel construction. (Murphy and Lewis 2005, A1). Remember that Judge Ginsburg was hired by the MTA to initiate cost recovery against Bechtel/Parsons Brinkerhoff.

Bechtel/Parsons Brinkerhoff never reimbursed the Commonwealth, or the taxpayers of Massachusetts, for their malfeasance until the January 2008 settlement: after the death of Mrs. Del Valle, the filing of civil lawsuits by the Commonwealth and the estate of Mrs. Del Valle, and the threats of criminal prosecutions. Bechtel/Parsons Brinkerhoff knew that the MTA and elected politicians were complicit in this malfeasance, corruption and personal/political/corporate gains. The corporate culture of Bechtel/Parsons Brinkerhoff is characterized by one of their manager's statement in that infamous recorded transcript: "You suck on the cow as long as it's alive."

George Santayana once said: "Those who do not remember the past are condemned to relive it." Massachusetts politicians did not heed the warnings and recommendations of the Ward Commission. The politically corrupt environment described by the Ward Commission did not change, in large part because the Massachusetts Legislature and Democrat/Republican Governors disregarded the Ward Commissions' findings and recommendations because it was not in their personal and political self-interest to do otherwise. They abdicated and exchanged their sacred obligation to the taxpayers of Massachusetts, the "public interest," for the patronage, campaign contributions and power that was facilitated by their "grande coalition" with Bechtel/Parsons Brinkerhoff. According to Common Cause/Massachusetts, a recent ethics reform bill proposed by the Massachusetts Legislature "is a significant step backwards for ethics enforcement ... We need a strong Ethics Commission empowered to do its job, not one hobbled by inadequate laws." (Estes, 2009, B1).

The victims of this malfeasance political corruption are not only the Del Valle family, but also the taxpayers of Massachusetts. There is not only a 2,000 item “to-do list” to complete the “Big Dig” (Bierman 2008, A1), but Massachusetts taxpayers who were recently informed that they now owe an additional \$ 7 Billion in interest on the debt owed by the Commonwealth of Massachusetts (Murphy 2008, A1). That’s \$22 Billion for that “little road project up here in Boston.”

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