PUTTING ORGANIZATIONAL THEORIES TO THE TEST:

An Explication of William Langewiesche's *American Ground: Unbuilding the World Trade Center*

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Abstract

Masters of Public Administration (MPA) students at Boise State University who enrolled in an organizational theory class during the spring semester 2003 read William Langewiesche's *American Ground: Unbuilding the World Trade Center* (2002) in addition to two textbooks. In small teams, students analyzed *American Ground* using organization theories they had encountered during the course. In this paper, we present analyses of Langewiesche's narrative using theoretical perspectives of: (1) organizational structure, (2) decision-making, (3) power and politics, and (4) organizational culture. We conclude with an assessment of the value of these theories for their efficacy in explicating Langewiesche's narrative.

Introduction

On September 11, 2001 (9/11) a stunned world watched the destruction of the World Trade Center. As the nation struggled to assimilate the news of this tragedy, a group of public and private sector organizations formed a new organization—a loose coalition that took on a series of shifting missions at Ground Zero. William Langewiesche, an international correspondent with *The Atlantic Monthly*, gained almost unrestricted, around-the-clock access to Ground Zero where he freely roamed "the pile" and attended meetings of engineers, city officials, construction companies and consultants during the clean-up effort. He published a series of three articles in *The Atlantic Monthly* (July/August, September, and October 2002) and in November 2002, these were published as a book. Essentially a narrative, *American Ground* provides stories from the inside circle of Ground Zero—stories previously unavailable to the public. It contains accounts of day-to-day operations at the site, and describes interactions that occurred among firefighters, police, engineers, and other mid-management city administrators, elected officials, construction companies, and construction workers as they coped with the shifting pile and the shifting politics.

For students and scholars of public administration and organizational theory, *American Ground* reads much like an extended case study in need of a rich subtext of theoretical explication. During the spring semester of 2003, MPA students in an organizational theory class at Boise State University read *American Ground* in addition to O*rganization Theory: A Public Perspective* (Gortner, Mahler, and Nicholson 1997) and *Classics of*

Organization Theory (Shafritz and Ott 2001). They worked in teams to analyze Langewiesche's book using theories they encountered in the course.

In this paper, we analyze Langewiesche's narrative using theories of organizational structure, decision-making models, power and politics and organizational culture, and we evaluate these theories for their efficacy in explicating Langewiesche's work. We include two appendices for the benefit of readers who are unfamiliar with *American Ground:* Appendix 1 provides an overview of the book, and Appendix 2 lists the names and titles of people mentioned in *American Ground*.

Organizational Structure: From "Chaos" to "Crude Management Structure" to " Pile Improvement Project"

The terrorism of 9/11 created an exigency for the United States in general and for New York City in particular. An exigency is a situation that demands prompt action and response, and a close read of Langewiesche's account *American Ground* reveals that three exigencies contended for action and response following the fall of the World Trade Center (WTC). The first was to find and rescue survivors; the second was to recover the dead; and the third was to clean up the mess. We hypothesize that actions and responses to these exigencies occurred in stages, that one exigency predominated during each stage, and that the actions and responses to the exigencies generated differing organizational forms. We do not suggest neatly packaged stages unfolded, nor do we suggest crisp and clean organizational structures prevailed. Rather, our purpose is to analyze actions and responses to the exigencies through the lenses of established organizational theory.

Stage 1: Initial Response (9/11 and a few days beyond). When the Twin Towers collapsed, New York citizens from disparate backgrounds moved toward the disaster, rather than away from it. Stockbrokers, shopkeepers, artists, and workers with hard hats and union cards joined firefighters, police and construction workers in response to the first exigency: Find and rescue the survivors. They attacked the debris by hand and formed bucket brigades, replicating one of the oldest fire ground technologies. Other players on the scene also did what they knew how to do.

Among the other players were the two top officials of New York City's Department of Design and Construction (DDC), a small agency charged with supervising municipal construction contracts. Ken Holden, DDC Commissioner, and Mike Burton, DDC Lieutenant, made their way to police headquarters mid morning and found "a chaotic hall filled with officials struggling to get organized" (Langewiesche 2002, 88). In an empty room beside the hall, Holden and Burton found a telephone and began making calls. They arranged to bring in light towers, alerted heavy construction companies to be on stand-by, enlisted DDC personnel, and organized the arrival of engineers. “No one asked them to do this, or told them to stop” (Ibid.). Police guarding the perimeter of the pile prevented Holden and Burton from entering the site until late afternoon. Nevertheless, by mid-afternoon, they had already arbitrarily divided the site into quadrants and assigned each quadrant to a construction company—having had no direct look at the scope of the destruction. They bypassed ordinary bidding procedures and hired construction companies they had worked with in the past—companies that responded immediately and worked for the duration without adequate insurance.

For the first few days, operations were out of control and ineffective. There was more motion than action—and nothing reflected the normal U.S. emergency-response system. FEMA and the Corp of Army Engineers, tight, hierarchical, paramilitary and military bureaucracies, and their cadre of disaster clean-up companies were not at the deconstruction site. It just didn’t occur to anyone to call FEMA. The prevailing ethos in and around New York was “this is our disaster” (69) and “this is not out of our realm” (95). New York City officials embraced the disaster, believing that the City had the professional expertise, the equipment and the connections to handle it.

An intriguing question lingered over the site during the first hours: Who was going to run this emergency operation? The most obvious candidate was the Port Authority of New York and New Jersey (Port Authority) the wealthy bi-state agency that built, owned and operated the WTC and maintained its executive offices there. However, the Port Authority offices were destroyed, and 75 employees killed, rendering it unable to provide leadership. The next obvious candidate was New York City’s Office of Emergency Management (OEM). However, the OEM lost its headquarters too, when Building Seven fell, and senior staff at OEM strategically limited their involvement to logistical support. A least likely candidate for managing the recovery effort was the City’s Department of Design and Construction (DDC). But, the rapid, tactical responses by Holden and Burton, and their just-do-it attitude, placed them in what was to become an unscripted leading role in the unbuilding of the WTC.

In the early days of pandemonium, a loose organization of a sort existed, if we accept Gortner, Mahler and Nicholson’s definition of “a collection of people engaged in specialized and interdependent activities to accomplish a goal or mission,” (Gortner, Mahler, and Nicholson 1997, 2). City employees and a patchwork citizenry comprised the collection of people. Their goal or mission was initially obvious: Find and rescue survivors. Lest this organization be mistaken as a classical one, let us be clear. Unity of command, chain of command, and scalar principles were non-existent (Fayol 1916; Weber 1922). Though differentiated, the organization sorely lacked integration and coordination (Gulick 1937). No one best way was evident for finding and rescuing survivors or for pulling away debris on the dangerous pile; and, the response by individuals and organizations was as much driven by raw emotion as it was by rationality (Taylor 1916). Although New York City had a vast bureaucracy—including the OEM—it had no preconceived plan for responding to a disaster of this magnitude. At best, a unity of direction was inherent in the exigency that guided those working at the site and around it (Fayol 1916). This organization likewise fails to meet the requirements of modern structural theories as articulated by Bolman and Deal (Shafritz and Ott 2001, 28). Systems of rules and formal authority were bypassed and the control and coordination key to maintaining organizational rationality were missing. No best structure existed, given the uniqueness of the situation, although over time, a structure took form and developed to satisfy the changing exigencies present there.

Stage 2: A Crude Management Structure (9/11 through late October). On the evening of 9/11, available New York City officials gathered in the cafeteria of Public School 89 (PS 89) for a meeting the OEM had arranged. Present were representatives from the DDC, the Fire Department New York (FDNY), New York Police Department (NYPD), and the Department of Sanitation, along with engineers, construction executives, and other construction company employees. The tenor of this meeting differed from the chaos of the day at the police station and two important resolutions were made. First, Mayor Giuliani scrapped the City's existing organizational charts, wiping out OEM's authority to manage the emergency, and putting the DDC in charge. Second, the group formulated its first strategy: Replace volunteers with firefighters, police, structural and civil engineers and unionized construction workers. No legitimate appointments to any positions were made and no formal organization was drawn up. Nonetheless, within three days, "a raw form of organization" emerged, with DDC's Lieutenant Mike Burton in charge and Peter Rinaldi from the Port Authority manning PS 89 logistics (Langewiesche 2002, 112).

After September 12, Burton led the twice-daily meetings in a kindergarten room at PS 89. Representatives from as many as twenty government agencies showed up for these meetings, including: the Federal Bureau of Investigation (FBI), the Environmental Protection Agency (EPA), the Department of Health, the

Medical Examiners Office, and even the Society for the Prevention of Cruelty to Animals (SPCA) law enforcement division. Other important players also attended: engineers from the Port Authority and the private firms of Thornton & Tomasetti and LERA, the World Trade Center's original designers; construction executive Bill Cote; firefighters Sam Melisi and John O'Connell, who specialized in collapsed building and rescue operations; and experts like Marty Corcoran, a marine-construction manager.

Time dictated everything on the pile and in these PS 89 meetings. There was no time to form committees, draw up plans, distribute memos, hold formal meetings with agendas, or use a chain of command for decision-making (Langewiesche 2002, 112). Meetings were informal and frank, with electronic recording devices banned and sketchy checklists sufficing as minutes. People identified problems, proposed solutions and were expected to take tough criticism for either their performance or their suggestions. Langewiesche reported that a new social contract replaced rank and resumes: Only the ability to provide what was needed now mattered (Ibid.,113). A perplexing problem confronted Burton and Rinaldi for several weeks: the sagging slurry wall on the south side of the site threatened to collapse and to flood Ground Zero and PATH, the underground train system linking New York and New Jersey. As Burton and others considered their options, they felt the earth move as structures beneath them collapsed. Likewise, they felt the pressure of City Hall, as officials around them demanded reassurances that could simply not be given. With as much objective data as possible, and as many expert opinions as he could garner, Burton prevailed in his own decision. Five days later, the dirt piled higher and higher and the wall, having drifted twelve inches, stopped—without collapsing.

During this stage, Mayor Rudolph Giuliani was the high profile political spokesman for New York City, and to most Americans, it probably appeared that the NYPD and the FDNY were in charge. In reality, a complex, dynamic set of relationships was developing in the crude management structure at PS 89—a structure that reached out across the pile. A few men with forceful personalities and latent leadership abilities—who were able to find balance within themselves—gained the greatest influence. They were discovered by others, asserted themselves as leaders, and called for others to lead, as well.

How then might organizational structure theorists characterize the raw organizational form that Langewiesche described? Classical and modern structural theories offer little explanation; even descriptions of matrix, team-based and project organization fall short, as these require planning, assignments, and definition (Gortner, Mahler, and Nicholson 1997, 100-101). One modern structural theory, however, is useful to our analysis.

Burns and Stalker (1994) (Ibid., 204) suggest that organic systems, in contrast to mechanistic systems, are appropriate for changing conditions. It is difficult to imagine a situation with more dynamic conditions than Ground Zero, and many of the attributes of organic systems prevailed at PS 89 including authority by consensus, network structure, informality, free flow of information for problem solving, continual adjustment and redefinition of individual tasks, and decision-making discretion. Burns and Stalker's description of the extensive spread of commitment to the concern certainly fits Langewiesche's observation that workers believed wholeheartedly that they were righting a wrong, and so put in long hours and slept little (Langewiesche 2002, 10).

Contingency theories claim that organizational structure may be based on technology, environmental circumstances or needs for continual learning (Gortner, Mahler, and Nicholson 1997, 102-3). The technologies for finding and rescuing survivors differ from those for recovering the dead, and both of these differ from cleaning up the mess. Hence, technology-based theories help us understand the conflicts among players at the pile. Perrow's classification (1967) of organizational technologies is especially useful (Ibid., 106-108). Rescue and recovery efforts called for a flexible, polycentric structure—one in which workers would have discretion to devise new procedures on a case by case basis, depending on the condition of the debris and the entrapped victim. The clean-up effort, by contrast, called for a flexible, centralized structure. The pile with its fires burning below and its precarious perch of debris constantly threatened to collapse or explode, rendering routine work, as construction engineers knew it, nearly impossible. The struggle between technologies, at its base, was a struggle among players whose purposes were in conflict.

We venture to say that the structure of the Ground Zero organization developed from its fundamental need for continual learning (Ibid., 116). Examples of personal learning technologies described by Peter Senge (1990) were abundant during September and October. Team learning, for example, was evident in the twice-daily meetings at PS 89: Those who showed up entered into a "thinking together," (119) as Senge would call it, and recognized patterns of interaction that undermined or supported learning. Langewiesche described a new social form that replaced rank and resumes, one in which only the ability to provide what was needed now mattered (Langewiesche 2002, 113). Shared vision was evident at Ground Zero; New Yorkers took ownership of the disaster, showed unfailing confidence that they had the expertise and resources to respond effectively, and believed wholeheartedly that they were righting a wrong. This super-ordinate vision united workers on the pile, while their membership in various tribes, and beliefs about which exigency should be responded to, tore at the underbelly of any unity. In addition, skills of personal mastery were evident as several individuals coped with the threat of the slurry wall collapsing. Burton, a mid-management administrator for the City of New York, and engineers Rinaldi, Tomasettii and Tamaro, sought objective reality as best they could. All were socialized as professionals to value the reduction of uncertainty and the minimization of risk. Rinaldi summarized their plight: "There's no clean, easy solution" (Ibid., 130). At this point, all but Burton faltered in their confidence and succumbed to pessimism, anticipating a worst-case scenario. Burton, however, demonstrated a degree of personal mastery—but not necessarily comfort—in taking risks and persevering with action in the face of uncertainty, ambiguity and possible further disaster. He simply asserted, "Keep the backfill going" (Ibid.). Fortunately, he was right.

Stage 3: Late October and Beyond. The third stage of the unbuilding process—late October and beyond—involved increasingly routine procedures, although the pile itself continued to present variability. As the third exigency, clean up the mess, intensified, so did the resistance of firefighters, their families and their widows who remained firmly grounded in the second exigency—recover the fallen firefighters. Conflict erupted on November 2 with the "Battle of the Badges" (155) between police and firefighters. Demonstrations, protests, fist-fights, arrests, and marches to City Hall occurred that day to pressure Mayor Giuliani to back down on the engineering effort so firefighters could bring their brothers home (149-154). Annoyed that firefighters had played hero roles for the media to the exclusion of everyone else working at Ground Zero, Mayor Giuliani determined to rein in the FDNY. He declared clearly that the FDNY, NYPD and Port Authority Police Department would have to participate in a joint command with the DDC, that access to the pile would be restricted, and that new procedures would be implemented. To brief firefighters and their families about the direction of the clean up and further recovery efforts, Mayor Giuliani held a meeting on November 12. A panel of leaders stood ready to offer rational explanations of operations, but was met with a tirade of arguments, complaints and accusations as wives and widows vented relentlessly.

These events, then, ushered in a third stage of organizational structure at Ground Zero—a stage Langewiesche identifies as a "pile improvement project" (173). Those in the inner circle at the site referred to Mike Burton as the "Trade Center Czar" (201) and likened the unbuilding tactics to open pit mining. Efficiency intensified. Workers installed a controversial access road, and construction companies moved to 24-hour shifts and learned technological approaches from each other. Burton assigned the DDC's Assistant Commissioner for Special

Projects, Lou Mendes, to roam the pile to bring order and discipline. Mendes served as a one-man organizational layer between Burton and Rinaldi at PS 89 and the construction companies working on the pile.

What do organizational structure theories contribute to our understanding of the third stage of organization at Ground Zero? Classical principles of scientific management inadequately describe how efficiency was approached on the pile. Bias for action and total quality management processes, on the other hand, more effectively reflect the move toward efficiency (Gortner, Mahler, and Nicholson 1997, 101; Peters and Waterman, 1982). Managers and workers collectively examined their processes and the conditions on the remaining pile to determine what to try next. An informal, semi-permanent team prevailed at the top in the twice-daily meetings at PS 89. Its membership varied with the problems that arose and the expertise that was necessary to solve them (Ibid., 101-102).

Perrow's classification (1967) of organizational technologies would predict that a flexible centralized structure would develop, given the technological imperatives of the third stage: Such was the case as the NYPD, the Port Authority Police Department and the FDNY were eased out of Ground Zero, and the DDC assumed greater centralized authority (Ibid., 106).

During the third stage, we observe further evidence that the organizational structure at Ground Zero was rooted in the need for continual learning. Examples of two personal technologies Senge (1990) identified as critical to learning organizations became evident: systems thinking and mental models. It was increasingly possible to comprehend what was left of the pile, and therefore to engage in systems thinking. As a consequence, interdependence between construction companies tightened, and pressure for cooperation between them mounted. Second, evidence of mental models being revised was apparent as Burton and Cote shared cold beers on November 12 after the confrontational meeting with firefighters and their families. They contemplated how their involvement at Ground Zero was a consuming professional experience, rather than a personal one. Open to the tirade of emotion by widows and wives of firefighters, Burton and Cote challenged their own deeply ingrained assumptions and generalizations to understand how others believed their actions were wrong, or even wicked (Langewiesche 2002, 169). Burton realized that he would need to keep his ambitions in check and that "America does not function as a dictatorship of rationalists" (Ibid., 170).

Running through all three stages of the Ground Zero organization were issues Gortner, Mahler and Nicholson (1997, 94-99) describe as part of the contemporary debate on organization design: centralization-decentralization, differentiation and integration, and the basis for departmentalization. From the initial chaos and the near anarchy responses, through the development of a crude management structure fraught with conflict, to transformation of the pile to the hole, the Ground Zero organization moved toward greater centralization of authority in its organizational structure. Nonetheless, there is equally compelling substantiation that workers on the pile exercised abundant autonomy well in to the third stage—a necessary and desirable feature given the vicissitude of conditions on the pile (Langewiesche 2002, 27).

The structure of the Ground Zero organization remained relatively flat for the duration, with few vertical layers: Holden at the top, running interference and procuring resources on his cell phone; Burton, calling together ad hoc groups of experts and conducting meetings; Rinaldi, manning headquarters; police and fire departments coordinating their own; and construction companies tending to their quadrant of the mess. Burton appointed Lou Mendes to supervise the construction companies, while Holden fought City Hall's attempt to bring in the San Francisco-based civil engineering firm, the Bechtel Corporation, as an additional management layer between the DDC and the construction companies (Ibid., 200). This was not a complex organization. Nevertheless, horizontal integration remained problematic in the first two stages of the unbuilding process. Pre-existing New York City departments acted in their realms of legitimacy, each competing with the others to tender their programs, policies and expertise—and to further the interests of their departments and disparate organizational cultures.

In summation, classical and modern organizational structure theories do not provide an adequate explication of Langewiesche's accounts of the unbuilding of the WTC, partly because of the time in which these theories were developed. We assume that the classical theorists simply could not have conceived of a disaster of this magnitude or the speed with which individuals or organizations could respond. Modern theories, still rooted in rationality and the search for a best structure, also fail us, except for Burns and Stalker's description of organic systems. More germane to the analysis of organizational structure are technology-based organizational theories and self-designing, or learning organization theories. Other theoretical perspectives—decision making , and power and politics, and organizational culture—significantly increase the depth and richness of our understanding of the tales Langewiesche tells of Ground Zero.

Decision-making Models: Explaining the Hodgepodge of Ad Hoc Decisions at Ground Zero

Another theoretical perspective useful for explicating Langewiesche's narrative is decision-making models. In the previous section, we concluded that classical and modern structural theories, with rationality as their critical assumption, failed to adequately account for the organizational realities at Ground Zero. A close look at decision-making models equips students with the theoretical tools to understand why structural theories are inadequate and indeed unrealistic. In this section, we present various decision-making models to analyze events in the unbuilding of the WTC.

The Rational Choice Model. The rational choice model holds much sway among social choice theorists (Shafritz and Ott 2001, 309). Essentially, this model suggests that organizations and their members follow a sequence of steps in a *rational* fashion, evaluating possible outcomes and consequences along the way, eventually arriving at an optimal choice. It rests on several assumptions, the first being that players in the organization share a unified goal or mission, and this shared objective channels behavior within the organization: "behavior is not accidental, random, or rationalized after the fact; rather, purpose is presumed to pre-exist and behavior is guided by that purpose" (Ibid.). Next, an evaluation of the available alternatives takes place. This presumes a perfect dissemination of information, a lofty assumption in itself. Theorist Jeffrey Pfeffer (1981) notes that Herbert Simon's (1957) "bounded rationality," which acknowledges the limited resources at disposal in the quest for information, along with the limited capacities of humans to discern such information, attempts to remedy this theoretical deficiency (310). From this set of alternatives then, cost-benefit analyses are performed against all available options. After such assessments are made, the optimal selection is made which "maximizes the social player's likelihood of attaining the highest value for achievement of the preferences or goals in the objective function" (Ibid.).

Because this is the dominant theory among scholars, it is largely assumed that this is the way things work in the normal bureaucratic world. But the aftermath of 9/11 was anything but normal. The utter chaos and sheer pandemonium afforded "rational" players little choice to follow a systematic set of procedural steps. A simple passage from Langewiesche aptly sums up the failure of the rational choice theory to explain bureaucratic decision-making and its influences of power and politics: "In other countries clear answers would have been sought before action was taken. Learned committees would have been formed, and high authorities consulted. The ruins would have been pondered, and a tightly scripted response would have been imposed. Barring that, soldiers would have assumed control. But for whatever reason…little of the sort happened here, where the learned committees were excluded, and the soldiers were relegated to the unhappy role of guarding the perimeter, and civilians in heavy machines simply rolled in and took on the unknown." (Langewiesche 2002, 12).

Given the tactical reponses of various city departments on 9/11, we conclude that the rational choice model itself is irrational—at least in this emergency situation—due to the assumptions it makes about bureaucratic structure and decision making. Pfeffer acknowledges this: "the rational model of choice implies the need for substantial information processing requirements… [that] may be unrealistic or unattainable in some cases…" (Shafritz and Ott 2001, 311). Hence, at a time when information was scarce (such as the difficulty associated with being unable to locate WTC blueprints), scattered (the plethora of players who possessed structural knowledge of the WTC, and those like Sam Melisi), and not altogether reliable (the uncertainty surrounding the structural integrity of the slurry wall or the amount of poisonous gas being circulated from the mangled air conditioning system), the rational choice model is thus insufficient to explain the power and politics which determine decision making (Ibid.).

The Bureaucratic Model. Unfortunately, the *bureaucratic model* offers no better theoretical underpinning. While it recognizes the limits of bounded rationality, it substitutes "procedural rationality" in its place (Ibid). This model relies on many of the same assumptions as the rational choice typology, except that it further constrains flexibility (in the name of ameliorating the problem of uncertainty) by introducing standard operating procedures (SOPs) as a means of dictating behavior. But, as was repeatedly and abundantly made clear throughout the unfolding of events, SOPs were worthless: "…the imposition of conventional order on these ruins was formalism or a fiction, and unnecessary… (Langewiesche 2002, 27). In recounting the initial mayhem and confusion at the first command center at police headquarters, Langewiesche notes that, "one of the deputy mayors there had formally been given the task of coordinating the construction response, but with little idea of how to proceed, he had done nothing at all."(Ibid., 88) SOPs did not dictate how to act in this crisis.

In what is the reader's first glimpse into a much-needed assumption of power, Burton, "faced with the urgent need to get crews and heavy equipment onto the job, bypassed ordinary bidding procedures and made some immediate choices…"(89). Furthermore, noting the manner in which Burton and Holden supplanted the OEM and marshaled the forces of New York's construction industry to respond, Langewiesche ponders, "None of this reflected the normal operation of the U.S. emergency-response system" (94). If the rational choice model is insufficient to explain the behavior of these players, then the bureaucratic model is equally inadequate, as there was nothing “standard” about this operating procedure.

The Political Model. Because there was no overarching objective or goal among all players at the pile, we come nearer to an organizational, decision-making apparatus that can explain power and politics in the *political model.* This model recognizes the seminal limitation of the rational choice model: a unified purpose driving player behavior. Instead, Pfeffer (1981), quoting Baldridge (1971) (Shafritz and Ott 2001, 25) notes that political organizations are pluralistic, with “various interests, subunits, and cultures…conflict is viewed as normal or at least customary…[and] action does not presuppose some overarching intention…” (Ibid., 313). Thus, barring no unification of purpose among players, inconsistent decisions will result (314). Consider the most divergent sets of interests at the WTC site: the firefighters and their union sympathizers, whose central focus was recovery of their dead; the police, who controlled the crowds and wanted to keep the firemen in check; and Burton, Holden, and City Hall, whose interests were in deconstructing the pile and returning the city to normalcy as soon as possible.

To further elucidate this theory, Burton and Holden made an inconsistent decision when they allowed the firefighters to continue their rescue operations, despite the fact that they would likely find no survivors and that they had become a nuisance on the site. Fearing violence and upheaval, they were allowed to remain.

While this model of decision-making comports to the unbuilding of the WTC more than the rational, it nonetheless has inadequacies. While the players need not have a unified purpose for action to predict their behavior, it is implied in this theory that each subunit (firefighters, police, engineers) have “preferences and intentions which are consistent across decision issues” (Shafritz and Ott 2001, 313-4), suggesting that there be no dissension among their individual ranks. This was not entirely the case either. As will be discussed when we examine organizational culture, while Giuliani sought to hunt down, fire, and arrest protesting firefighters and ironworkers, Holden refrained from going bloodhound, primarily fearing mass rioting at the pile, but also “to protect Giuliani from himself, and the nation from Giuliani, and to keep the recovery effort on track” (Langeweische 2002, 153). This makes the *anarchy model* of decision-making more attractive.

The Anarchy Model. This decision-making model assumes there is no overarching goal and further posits that there is no “consistency or consensus over behavior” among the subgroups either (Shafritz or Ott 2001, 313). However, despite the plausibility and attractiveness of this model, an organizational structure took shape in the third phase of deconstruction and proved to be very efficient, suggesting that certain subgroups may have altered their goals to conform to those of City Hall. This theoretical shortcoming leaves only consideration for some model in between the political and the anarchy.

The Garbage Can Model The *garbage can model* (Cohen, March and Olsen 1979) fits the bill. Like the political and anarchy models, this method acknowledges the uncertainty in decision making brought about by inadequacies of knowledge, and, according to Gortner, Mahler, and Nicholson (1997, 239), "serve[s] as a forum for individual and group expression of conflict, values, myths, friendships, and power." Citing Cohen, March and Olsen, Pfeffer (1981) provides an apt analysis of the model: "decision points are opportunities into which various problems and solutions are dumped [into a decision-making garbage can] by organizational participants" (Shafritz and Ott 2001, 312). The decisions that emerge "reflect shifts in the goals, beliefs, and attention of participants. Goals are defined—to the extent that they are ever clearly specified—only in the process of considering particular proposals and debating whether to accept or reject them" (Gortner, Mahler, and Nicholson 1997, 240).

Criticisms of the *garbage can model* center around the lack of case studies to test its usefulness (Ibid.). Nonetheless, Gortner, Mahler and Nicholson, citing Olsen (1979, 83-85) assert that this model is "most accurate under conditions of change, when organizational goals and opportunities are most ambiguous…[and] under conditions of organized anarchy" (Ibid.).

Hence, this model, while not perfect, is the most satisfactory in explaining the hodgepodge of ad hoc decisions that flowed from the divergent set of WTC players, their personalities, the cultures of their organizations, and their sets of interests. Each party devised solutions reflecting those that would normally be expected to emerge from their respective organizations, and each did so in ways that left a stamp on the legacy of the unbuilding.

Most assuredly, elements of all the decision-making models, even those not discussed here, can be found in the deconstruction of the twisted mass of steel and concrete formerly known as the WTC. But all are lacking in some fashion, and leave much to be explained, save for the *garbage can model*. Because it is a relatively young theory, it receives limited consideration in organizational theory literature. This may be due to the model's dearth of experimental measurement. Nonetheless, we find that the *garbage can model*, no matter how young or untested, most sufficiently explains how order was somehow wrought from such chaos and by what means. Ironically, perhaps the tragedy of 9/11 was the chance that was needed to put this theory to the test.

Power and Politics: The Vacuum of Formal Authority and Vicissitudes of Action and Resistance

In the previous section, we examined the paradigms of decision making, as they pertained (or did not pertain) to the unbuilding of the World Trade Center. This consideration facilitates a better understanding of power and politics in decision making. These theories help explain aspects of human behavior that cannot be deciphered with the structural theories that are so prescriptive. In essence, theories of power and politics provide the conceptual glue that bonds various elements of the unbuilding process. They explain how culture evolves, which determines an organization's structure, which in turn describes what kinds of decision-making methods are used. In this section, we examine power through the lenses of legitimacy, coalitions, dependency and coercion and how politics influences and relates to each.

Legitimate Power. As was previously asserted, by all measures of bureaucratic reasoning, the Port Authority *should* have been in charge of cleanup operations at the site, and *would* have, had their administrative apparatus not been vaporized in the structures' collapse. Likewise, the OEM was incapacitated and thus unable to effectively lead the emergency response.

The DDC, through Holden and Burton's quick decision making, filled the power vacuum, assumed control of the situation and set forth a chain of events which put them in charge simply by chance: it was "given the lead for the simple reason that its two top officials…had emerged from the chaos of 9/11 as the most effective of the responders…only the DDC seemed capable of moving ahead" (Langewiesche 2002, 9; 69).

But Jeffrey Pfeffer (1981), and John French and Bertram Raven (1959) assert that once power becomes legitimate, it becomes authoritative (Shafritz and Ott 2001, 305; 323-4). "There was no golden moment in which Holden and Burton were placed definitively in charge. Rather, there was a shift of power in their direction that was never quite formalized and, indeed, was unjustified by bureaucratic logic or political considerations" (Langewiesche 2002, 118). Yet Giuliani, as any skillful politician would, saw what was working and, in what many viewed as a smart decision, decided to "scrap the organization charts…and allow the DDC to proceed" (Ibid., 66). Although never officially sanctioned or recognized by the firefighter unions onsite (164), presumably because of their different organizational goals, they too understood who was in charge organizationally. If not, it surely became evident to them when Giuliani unleashed his ire and rage among their ranks when they protested the reduction of their presence on the pile—at the urging of the DDC.

Pfeffer also theorizes that the more authority is exercised, the more legitimacy is gained, and the more decision makers' power is strengthened. As this occurs, he notes, certain norms of behavior develop which indicate the acceptance of this influence (Shafritz and Ott 2001, 306). The twice-daily meetings at PS 89, the expected level of productivity from the excavating crews at the site, and the deferential bestowal of fear and unquestioned authority given taskmaster Lou Mendes serve as fitting examples.

External Coalitions. The only wrench thrown into the gears of this theoretical machine was the firefighters' union's "refus[al] to submit to civilian authority" (Langewiesche 2002, 164). Henry Mintzberg (1983) would classify this as influence from *external coalitions*. Even though comprised of players internal to the process, unions are artificial, collective entities that exert influence as an entity peripherally (Shafritz and Ott 2001, 356).

Expert Power. What French and Raven term "expert power," and what Mintzberg describes as a "dependency" (Shafritz and Ott 2001, 325; 354) account for the architectural firm LERA's involvement in the demolition. The company, which built the WTC, had a long history with the site. It had been the main Trade Center consultant for thirty years and was the primary responder after the 1993 bombing. After the collapse of the towers, LERA possessed the only surviving blueprints of the complex—"and it was careful to hand over just what was needed" (Langewiesche 2002, 30-31).

According to Mintzberg, control of a "resource, technical skill, or body of knowledge, any one critical to the organization" (Shafritz and Ott 2001, 354) will empower an individual (or in this case, a firm) to command influence in the organization. Holden and Burton did not initially contract with LERA to act as the main consultant for the project, even though they had the necessary expertise, but instead relegated them to serve as a consultant to the consultants on an ad hoc basis (Langewiesche 2002, 30), consistent with the inputs and decisions of the *garbage can* model of decision making. But when it was discovered that it was the guardian of the original WTC plans, LERA's participation became in Mintzberg's words (1983) "essential, concentrated…and nonsubstitutable" (Shafritz and Ott 2001, 354). Thus, power in this case was gained by virtue of others' needs.

Politics as Power. Pfeffer (1981) notes that, "if power is a force, a store of potential influence through which events can be affected, politics involves these activities or behaviors through which power is developed and used in organizational settings…politics is the study of power in action" (Shafritz and Ott 2001, 307). In addition to all of the aforementioned parallels to power the various organizations and subunits considered, it is worthy to examine the distinct notions of power experienced by individual characters in *American Ground*. With these in tow, it becomes easier to interpret the political struggles that beleaguered the unbuilding.

Unintentionally falling into the theoretical bureaucratic snare of which sociologist Robert Merton (1957) forewarned (Shafritz and Ott 2001, 107), Burton harnessed this new power he acquired and increasingly strengthened his sphere of authority: “When he went to work for the DDC, in 1996, it was not to take refuge, as so many do in government, but to gain experience in wielding power…he had not the slightest thought of advancing his career. Nonetheless, by the end of the first week it was impossible to ignore that a great opportunity had arisen here. People already were calling him a “czar,” and the press had picked up on the metaphor, and at the twice-daily meetings he was wielding more power than he had thought possible before…”(Langewiesche 2002, 114-115).

Firefighter Sam Melisi, experienced power revelations of a different sort: “the power surprised and plagued him to the end; he did not think of himself as a leader, and in other circumstances he probably would not have been one. Nominally he was always just a fireman…he rose to it [power] uncertainly, but gradually assumed the all-important role of mediator.” (Ibid, 22-23).

Coercive Power. Pfeffer avers that politics involves “activities which attempt to influence decisions over critical issues…in which there are differing points of view” (Shafritz and Ott 2001, 307). French and Raven (1959) note that *coercive* power is “based on the perception that person one has the ability to inflict psychological or physical pain if person two is not obedient and loyal.” (Gortner, Mahler and Nicholson 1997, 321). Such coercive power was exercised by the firefighters on site and in their skirmish with the Mayor’s office, triggering a manifestation of politics (Langeweische 2002, 131-2; 151). Giuliani followed up with some coercive power of his own. Upon learning of the protest, the he commanded Holden to hunt down the ironworkers and firefighters involved and fire them (Ibid., 152). Fearing mass upheaval at the pile, Holden delayed implementing the order and stalled ambiguously, in the hopes that Giuliani’s hotheadedness would recede. In the meantime, the Mayor had several firefighters hunted down and booked on charges of “criminal trespassing,” the leaders of the two firefighters’ unions among them (Ibid., 153). One of them, a twenty-eight year veteran of the department, remarked “They’re putting me through the system like I’m a thug.” A union spokesman also criticized the Mayor this way: “The mayor fails to realize that New York City is not a dictatorship, where if you don’t like what a union is doing you can just go and lock up a union's president. The message being sent from City Hall is that if you don't agree with this administration, we will get you" (154).

Power and Organizational Culture. The culminating fire of politics was fanned by the buildup of power bases between both the firefighters and the city administrators charged with demolishing the site. The emergent culture at Ground Zero came to a head-on collision with the longer-established culture at City Hall (which also had a unified purpose—deconstruction and return to normalcy), and the Mayor responded swiftly and with little regard for dissension. Edgar Schein (1993) writes that, "we know of groups, organizations, and societies where cultural elements work at cross purposes with other elements, leading to situations full of conflict and ambiguity" (Shafritz and Ott 2001, 373). This, he cites, can be due to: "Insufficient stability of membership, insufficient shared history of experience, or *the presence of many subgroups* [emphasis ours] with different kinds of shared experiences…some of these subcultures will typically be in conflict with each other, as is often the case with higher management and unionized labor groups…each of us belongs to [so] many groups that what we bring to any given group is influenced by the assumptions that are appropriate to our other groups" (Ibid., 373-75).
Each group at the pile had divergent interests and they brought with them the baggage of their own organizations' culture, and each was simply too asynchronous to avoid political conflict—"power in action" (Pfeffer 1981).

Unlike the myriad theories attempting to predict and explain decision-making, the numerous conceptions of power and politics fit into the eventful structure of *American Ground* rather nicely. Power and politics can be envisaged in any organization, but seem especially evident in the sheer magnitude and salience of this case study. Moreover, what becomes clear is that, while power and politics emanate from the various decision-making structures employed, they are very much influenced by an organization's culture. This discussion catapults us into our next section.

Organizational Culture: The Emergence of a Unique, Temporary Culture at Ground Zero

Organizational culture theories provide us with yet another set of conceptual tools for examining Langewiesche's narrative—tools that allow us to examine some of the less tidy aspects of Ground Zero. These theories suggest that intangible and unobservable phenomena underlie organizational actions including values, beliefs, assumptions, perceptions, behavioral norms and patterns of behavior (Shafritz and Ott 2001, 361). An organization's culture is fundamentally "a pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems" (Shein 1993). By working and learning together, organizational members create a culture that is unique and different than other organizational cultures (Schein 1993; Cook and Yanow 1993).

Our analysis begins with a recognition that four intact "tribes" worked at Ground Zero: firefighters, police, engineers, and construction workers. Second, we examine the tensions that mounted between the tribes, and the inevitable clashes that took place. Third, we contend that both individual and organizational learning occurred. Then, we describe key aspects of the unique organizational culture that developed at Ground Zero.

Component Cultures: Firefighters, Police, Engineers and Construction Workers. There is no doubt that the principal groups involved in the deconstruction process had very different cultures. The firefighters, as described by Langewiesche (2002), were a group of "brawny, square-jawed men," (157), "straightforward guys" (147) who were "normally brave" (156), and whose jobs demanded "mental willingness and hard physical labor" (Ibid.). A defining characteristic of the firefighter culture was the intense loyalty firefighters showed each other. They were, after all, "initiates in a closed and fraternal society who ate together at the station houses, and shared the drama of responding to emergencies" (147). The police were similar to the firefighters in many ways. They wore uniforms and badges, and they too had an intense loyalty to each other. However, for the police this loyalty was forged through partner relationships, and police loyalties tended to be more dyadic than system wide. Not surprisingly, then, the police showed more respect for rules and order, which meant they were less likely to take unnecessary risks or avoid orders. One example of a policeman's lack of imagination and strict adherence to rules occurred when an officer arrested a man who explained he was swimming from New Jersey to New York City to go help the victims. In sharp contrast to the cultures of firefighters and the police was the culture of the DDC engineers. Their focus on risk-reduction, probability analysis, and careful examination of facts characterized them as cautious, conservative and rational. They were accustomed to working independently, and hence typically eschewed risk-taking. Next, card-carrying union employees of the various construction companies were accustomed to working on government contracts where lunch breaks were ample and mechanical difficulties would lead to hours of inactivity. They had the reputation of not caring about their jobs beyond their paychecks (180), and of expecting clear commands from their supervisors (178). Finally, it is clear that the private-sector construction companies were used to working independently of one another—not working cooperatively. When AMEC's equipment broke down at Ground Zero, they simply stopped their work and waited for new equipment to arrive—presumably having no thought of asking Bovis or Tully to lend them what they needed until theirs arrived (176).

The Battle of the Badges: Tribal Warfare. Not surprisingly, when these very different organizational cultures had to work together at Ground Zero, conflicts ensued. On 9/11 police and fire departments staked out their own command centers several blocks apart . Both tribes were in communication within their own ranks, but not with each other. They quarreled over turf and even operated separate bucket brigades that day. “This tribalism festered and soon infected the construction crews, too…” (155-156).

As the weeks passed, resentments, pressures, and the constant presence of the dead caused extreme tensions to boil over among the tribes of workers and City Hall. Firefighters were convinced that the DDC’s attempts to expedite the cleanup of the site would prevent them from finding the bodies of their brethren, leaving them to be unceremoniously dumped at the Fresh Kills landfill on Staten Island. The sentiment was expressed by one firefighter who told a newspaper reporter, “The city may be ready to turn this into a construction project, but we are not.” (147). After Mayor Giuliani informed the firefighters that they would no longer have free access to the site, about 500 of them protested. As they attempted to move onto the site, the police stopped them—as they were charged to do. A scuffle ensued, fist fighting escalated, and numerous arrests were made not only that day, but in the days that followed. Mayor Giuliani was livid and did not seek conciliation (153). While bumper stickers outside the site proclaimed “UNITED WE STAND,” dissension on the pile threatened a full-scale social implosion (154).

In hindsight, it was easy to see the “Battle of the Badges” coming. Shaken by the terrorism and feeling insecure, people in the U.S. felt the need for heroes. “The dead firemen certainly fit the bill,” Langewiesche observed (157). Firefighters were idolized with the full force of modern publicity (69). This publicity affected them: “The image of ‘heroes’ seeped through their ranks like a low-grade narcotic. It did not intoxicate them, but it skewed their view” (158). Firefighters took on an “ unspoken tribal conceit…the deaths of their own people were worthier than the deaths of others—and…they themselves, through association, were worthier too.” (156). This was exemplified by the painstaking effort they took when searching for their fallen comrades. Work on the pile would often come to a complete halt when a body of a firefighter was found and the utmost delicacy would be taken to remove it. Police, who had also lost many of their own, resented the undue publicity given to firefighters and the privileged regard firefighters showed for the bodies of their dead. Though the construction workers were not involved in the melee, they too resented the firefighters' hero status. The DDC engineers, charged with the task of pushing firefighters, police and construction workers ahead in the unbuilding effort, further escalated the turf wars. Each tribe was clearly operating outside its comfort zone. For a time, only one belief united those at the pile—the belief they were righting a wrong.

Learning: Individual and Organizational. Some theories focus on individual learning as a critical aspect of organizational culture (Senge 1990; Louis 1980), whereas others focus on organizations as cultural entities that learn in groups and through group activities (Cook and Yanow 1993; Schein 1993). In describing learning organizations, Senge (1990) identified five personal learning technologies or disciplines that individuals must develop in order for organizations to tap the expertise and commitment of their members (Gortner, Mahler and Nicholson 1997, 118-119). In our earlier analysis of organizational structure, we pointed out examples of these disciplines in use.

Another theory that focuses on individual learning addresses the experiences of newcomers in organizations (Louis 1980). Newcomers typically experience "change" between their old setting and culture and the new setting and culture; "contrast" between the roles they played in their old organization as compared to the roles they are expected to play in the new one; and "surprise" at the disconnect between their anticipation of the new organization and the way things actually are. Those who came to work at Ground Zero surely experienced extraordinary change, contrast and surprise. As newcomers, they experienced the emotional toll of working around bodies and body parts, the physical toll associated the long hours, and the mental toll of danger lurking with every step on the pile. These common experiences undoubtedly contributed to some level of cultural identity. But Langewiesche provides particular evidence of newcomer experiences, as well.

Take Marty Corcoran, for example, the marine construction manager with Weeks Marine in New Jersey who made his way to the meeting in the cafeteria of PS 89. He described his initial reaction to Ground Zero, "It was unbelievable. There are ten thousand meetings going on…The OEM has lost everything—it's like all their preparations were thrown out the window. Now you have OEM, you have the Fire Department, you have EMS, you have Salvation Army, you have all these billions of people involved, and you're sitting at a cafeteria table trying to discuss something with all these distractions going on around your head. It was insane." (108-109). Corcoran found Burton and shared his idea—barging debris to Fresh Kills instead of hauling it over land. He later reflected to Langewiesche that talking to Burton, "[I felt] like I was speaking another language to him. The last thing he wanted to hear was some marine contractor coming in with ideas and schemes.” (110). Already, officials at PS 89 had realized that “this was not Oklahoma City, where cattle still graze close to downtown, and empty space is everywhere” (Ibid.), so Corcoran’s plan was plausible to them. When he learned the site had been divided into quadrants and assigned to construction companies, Corcoran was surprised, but adjusted quickly, “If these were the rules of the game, you just had to figure out how you were going to play by them.” (109). What mattered was speed and physical progress, an aspect of the new culture that Corcoran not only grasped, but could offer. More surprises came for Corcoran as he recognized some distinct advantages in the highly decentralized organization: For a few days, he was busy “inventing solutions to problems as they arose” (111) in the same manner as Holden and Burton. Corcoran acclimated quickly to the new culture.

Langewiesche describes many men who were thrust into new roles at Ground Zero and experienced contrast between their old and new roles. He describes Peter Rinaldi from the Port Authority, who supervised consultants from PS 89. “I met him at the start, when he seemed tentative and out of place, and I watched him through three seasons to the end, by which time he had become, both above and below ground, the one man everyone turned to for an opinion.” (26). Sam Melisi, a firefighter with experience in collapsed building and rescue operations, had talents that actualized in October and November as he assumed an important role as mediator between the multiple opposing forces on the pile (23). Evidence of Holden’s and Burton’s newcomer experiences abound within the narrative, but more notable was Langewiesche’s account of the contrast in their relationship prior to and after 9/11. The author describes them as “an unlikely duo” (65) and an “awkward pair” (66). Holden, “the DDC’s shrewd and intellectually sophisticated commissioner” (65), and Burton, the slightly younger one, “aggressively climbing the ladder of social and material success” (66) had not had an easy relationship over the years due to personality differences (111). In the face of 9/11, however, the two men “forgot their differences and stood back-to-back, inventing solutions to problems as they arose” and shared the feelings of urgency and fatigue that characterize the battlefield experience (Ibid.). By the end of the first week, when people were calling Burton “Trade Center Czar” and he was heady with his newfound power, Burton gave some self-aggrandizing interviews, intimating that Bill Cote, his college roommate, and the four main contractors had been called in by New York City because they were his friends (113). Holden redressed Burton about this, threatening to fire him if he ever gave such an interview again. “Burton acted contrite, and may truly have appreciated Holden’s warning,” Langewiesche wrote. Holden’s discipline at this point helped Burton refocus his priorities.

We turn now to a discussion of "organizational leaming" and "double-loop learning." Cook and Yanow (1993) regard organizations as cultural entities that "learn" in groups and through group activities, because groups engage in activities that cannot be performed by individuals; and, Argyris and Schon (1978) describe "single-loop learning" (recognizing error due to departure from established procedures or goals) and "double-loop learning" (recognizing error due to outmoded procedures or goals, and the need for change). A poignant example illustrates the transition from individual to organizational learning and the difference between single loop learning and double loop learning. Early on 9/11, Burton ordered a half-mile of sidewalk bridging to protect people from falling glass—he simply could not comprehend that the towers had fallen (Langewiesche 2002, 89). Later in the day, when the police permitted Holden, Burton, and others to walk the pile, the severity and vastness of the disaster—and the unprecedented problems it posed—became evident (Ibid., 90-91). Not only was sidewalk bridging outmoded—even ludicrous—so were most other ordinary procedures and goals in the minds of individuals. Action and invention at every level would be necessary, and traditional hierarchies would break down, along with established protocols. The enormity of the destruction made the final goal of "a clean hole" remote and difficult to understand (13). Individuals were entirely unable to involve themselves in all of the activities on the pile—or even be aware of them. Therefore, the knowledge that was required to unbuild the fallen WTC did not rest with individuals, but with the organization as a whole. Another less poignant but illustrative example also demonstrates that organizational learning and double-loop learning occurred. Although Holden and Burton divided the pile into quadrants on 9/11 and assigned construction companies to each, it was entire construction companies, not individuals, who grappled with ways to remove the rubble when the neatly marked boundaries between them became obscure. All had to learn as collectives, learn from the other companies, and learn how to collaborate with each other and the DDC.

Schein (1993) suggested that organizational culture develops in groups with a stable membership and a history of shared learning. From shared experiences, individuals begin to form a set of shared assumptions about the way things operate or why things happen the way they do. Consider David Griffin, the "token Southerner" (184) from North Carolina, a demolition expert who decided to go to New York on a whim (187). What makes Griffin so interesting is that he approached demolition in a way that was foreign to New York construction workers. When they came in contact, they learned that there was more than one way to tear down a building. Griffin used a wrecking ball on Buildings Four and Five after "juicing them up" (189)—a dangerous procedure involving pre-cutting the internal structures of the buildings. His crews toppled a skeletal wall by arranging five grapplers side by side and pulling on cables bolted to the top; they rocked the wall, broken at its base, until it toppled. He also brought down the Marriott ruins, when DDC engineers had concluded there was no safe way to do so (190). Griffin put an excavator directly on top and wrecked it from above. Overall, Griffin's tactics were faster and cheaper than New York City's standard incremental deconstructions. Griffin's presence indicates how an infusion of new ideas can positively effect organizational change and organizational learning.

***The Organizational Culture at Ground Zero*.** Describing the organizational culture at Ground Zero is a formidable task, considering that organizational culture is implicit as well as explicit, unconscious as well as conscious, and is largely based on intangibles that are hidden yet unifying (Shaftritz and Ott 2001, 361). From Langewiesche's narrative, we glean these indications of organizational culture: (1) an action orientation; (2) a penchant for autonomy and independence; (3) simultaneous loose-tight properties; (4) a proclivity toward dispute; and, (5) a pervasive and palpable masculinity.

An action orientation, as described by Peters and Waterman (1982) was an underlying value and behavioral pattern we observed throughout Langewiesche's book. Doing something—anything—was the norm. Peters and Waterman (1982) suggest that a "bias for action" is facilitated by organizational fluidity; rich communication; a series of pragmatic actions; small, short-term ad hoc task forces; and freedom to experiment. All of these were in evidence at Ground Zero. To wit, Holden and Burton established a fluid, flexible organization that remained nimble. Its simple form, with few administrative layers, was key. Holden was on his cell phone for nine months, garnering resources and buffering Burton's operation from political attack. Only during the pile improvement stage of the clean up did a supervisory level—in the person of Lou Mendes—separate Burton and those at PS 89 from workers on the pile. Rich communication took place in the frequent, informal, open, and inclusive meetings at PS 89 (113), with Rinaldi's continuous presence at PS 89 (26), and during Burton's walks around the pile twice daily and once at night (171). Langewiesche reports, "Holden and Burton responded tactically, with no grand strategy in mind" on 9/11 (88). Such pragmatic actions continued for the duration. Burton assembled and disbanded small groups of experts for specific and limited purposes, including: the group that took the walk on 9/11 (90); the team that descended into the debris and floods in search of Freon and its source at the chiller plant (19-34); and the group that addressed the threat of the sagging slurry wall (119-131). Until the pile became the hole, work at Ground Zero became rougher and more complicated, rather than less so (171). Therefore, most of the work was more experimental and improvisational than routine.

The penchant for autonomy and independence is reflected in Rinaldi's recognition that "…the imposition of conventional order on these ruins was a formalism or a fiction, and unnecessary. Progress was made instead in the privacy of a thousand moments, on loose, broad fronts, by individuals looking after themselves and generally operating alone" (27). Indeed, this is how twenty men descended into the pile to search for the chiller plant. This independence and autonomy may also be glimpsed in the image of the distraught firefighter with the wild eyes who told Holden, "I've got two friends out there. And I've got my son buried right in here," and then wandered off with his shovel, and climbed down into a hole, disappearing into the rubble (70).

"Simultaneous loose-tight properties" described by Peters and Waterman (1982) were evident at Ground Zero. Unifying those who managed the city and those who worked on the pile were beliefs that included a localized ownership of the disaster (69), a conviction that New York City had the resources to take care of it (95), and a passion that they were righting a wrong (10). Some of the power and politics reflect the struggle between City Hall and the DDC with regard to the "loose" part of the equation. Even with Holden operating as a boundary spanner, City Hall's tolerance of those working on the pile was frequently strained. When discipline floundered on the pile November 2, Mayor Giuliani had firefighters arrested and demanded that Holden identify and fire the ironworkers who had demonstrated with the firefighters (151-152). Holden and Burton's procrastination on this action protected Giuliani and potentially prevented a full-scale rebellion. Much later, in the spring, City Hall backed bringing in the Bechtel Corporation, a San Francisco-based civil engineering firm, as an additional management layer between the DDC and the construction companies (200). Holden aggressively opposed this attempt at tightening the operation, indiscreetly dubbing this a "sweetheart deal" (201). When Mayor Michael Bloomberg took office, he put Holden "on ice" (Ibid.)—his status in managing the DDC and the Trade Center operation was moved to a transition basis. Later, Bloomberg reappointed Holden when the press printed favorable reports of his contributions.

The proclivity toward dispute that was a part of the Ground Zero culture has been well documented in our discussion of component organizations that rubbed elbows on the pile. In addition to the public, dysfunctional dramas, other disputes served more constructive ends. In the meetings at PS 89 where participants identified problems and proposed solutions, arguments and criticism were expected to evaluate alternatives and choose the best possible actions (112).

Finally, the culture at Ground Zero was pervasively and palpably masculine. Using Joan Acker's (1992) theory of gendered organizations as our rubric, we note first that "gender division" is indisputable; most of the people who worked on the pile were men (Shafritz and Ott 2001, 392) . Langewiesche (2002) mentions only one woman working in the inner circle—"a pugnacious woman," at that—Becky Clough, a DDC manager. He mentions only two women in support roles, a Red Cross volunteer (126) and a consulting psychologist (191), but we assume that less gender division prevailed in support service organizations on the perimeter. Second, Acker claims that the "creation of symbols and images" in organizations frequently involves gendering (Shaftritz and Ott 2001, 393). The media idolized firefighters as national heroes, and some responded by "grandstanding…striking tragic poses, and playing themselves up" (Langewiesche 2002, 69). Our earlier discussion of the distinct culture of firefighters as "brawny, square-jawed men" (157) who took unnecessary risks with reckless self-abandonment provides further masculine symbolism. One firefighter tried to climb a twenty-foot chimney in the unstable rubble (33), others jumped suddenly into newly opened debris holes, climbed on unstable cliffs or stood for hours in smoke and dust, refusing to wear their respirators (71). This risk-taking behavior became widespread among those who worked at Ground Zero and is exemplified in a yelling match between David Griffin, the demolitions expert from North Carolina, and a fire chief. When a large section of steel unexpectedly fell, the fire chief rushed up to Griffin and asked where the safety zone was. To this, Griffin answered, "Chambers Street," which was the site's outer-perimeter line. Langewiesche observed, "The fire chief got the message. Most people eventually did. Risk was the very nature of the Trade Center operation" (191). A psychologist attributed this excessive risk-taking behavior to survivor guilt, but Langewiesche thought it looked like a simpler form of grief or a creative, courageous impulse "linked to the need for action and improvisation and personal freedom" that emerged at the World Trade Center site—something that the culture at the site demanded (72).

Acker would also have us examine "interactions between individuals" as a further means to identify gendering processes at work in an organization (Shafritz and Ott 2001, 393). Here we find rich data indeed to illustrate the enactment of masculinity. First, consider Lou Mendes, a DDC supervisor. His style was to stand toe-to-toe with other big guys on the pile and systematically lose his temper: "He would take on self-respecting men and ridicule and scold them as if they were delinquent children." (175). When construction firm AMEC had a slow down in its operation, Mendes launched a vitriolic attack, humiliating them and threatening to throw them off the job. Similarly, when another construction firm, Bovis, experienced a lag in productivity, Mendes again expressed his outrage, belittling their work as “a circus” (177-178). A field supervisor tried to explain the problem as a lack of clear command, and asked for charts to show how authority should flow. Mendes went ballistic: “Charts! A goddamned chart! We’ve got charts coming out the ass. We’ve got charts of charts! We’ve got charts to make charts!” (178). Mendes swore, taunted, blamed, name-called, and made fierce demands. “I want guys pushing trucks! Today! Tonight! Trucks! You got it?” (179). “Okay, Lou,” was the response, “Tonight I’ll read them the riot act. We’ll see what happens.” Mendes got the last word in, “Push them, Charlie. They’re not made out of wax” (180). Mendes was considered “a good and necessary man” (177).

In another example, engineer Pablo Lopez stopped by Thornton-Tomasetti one day, and was offered a session with a consulting therapist the company had retained to assist its employees. Irritated that she asked him to close his eyes and imagine a safe place, he launched into a sarcastic, mocking tirade with Langewiesche the following day: “I mean, where’ve you been lady? I live in New York City, and there’s an anthrax scare going on! I go home, and my wife is ironing the mail! And where is it I work? It’s underground in the World Trade Center.” (191). His harangue was an assertion of masculine ethos, and a refutation of anything that smacks of femininity. Langewiesche interpreted, “He lived at the center of the world because he liked the action…He wasn’t searching for safety. He didn’t need to close his eyes, or to make himself comfortable. He didn’t need the teddy bears that volunteers kept handing out. And he wasn’t afraid of the dead.” (192).

Yet another point of gender enactment lies in the emotionally expressive behavior of the wives and widows of firefighters at the meeting Mayor Giuliani called on November 12. A panel of leaders including Burton, Cote, a fire commissioner, and the medical examiner, was prepared to brief firefighters and their families about the deconstruction operations and recovery efforts. This rational, information-sharing meeting ended with an outburst of raw emotion. The women yelled and railed at the medical examiner, calling him a liar, when he rose to speak. They said they didn’t even want to hear from Burton—whom they dubbed Mr. Scoop and Dump—when he tried to speak (166). Their tirade of feminine anger and tears contrasts sharply with that of the firefighters on the pile whose masculine expression of grief morphed into excessive risk-taking behavior and a dogged determinism to recover and their honor their dead as heroes.

A final example of gender in interaction: "The Red Cross volunteers were unusually gentle with people in the food lines—presumably because they had been told that conditions on the pile were traumatic and they believed that the workers required comfort." (127). Langewiesche characterizes them as a kinder, gentler folk, fulfilling supportive, feminine roles, regardless of whether they were women or men. Gender, as socially constructed masculine or feminine, does not always correlate with biological sex.

Acker (1992) points to a fourth dimension of gendering organizations: "the internal mental work individuals do to construct the correct gendered persona" (Shafritz and Ott 2001, 393). Though we do not have access to the internal mental work of those we met in *American Ground*, we do have Langewiesche's descriptions, and those allow us to speculate. Becky Clough comes to mind as an immediate, if brief example. She apparently succeeded in creating a masculine persona, appropriate for a DDC manager; "pugnacious" is hardly descriptive of femininity. Sam Melisi also comes to mind. As a firefighter with experience in collapsed building and rescue operations, he had also worked in the construction industry before becoming a firefighter. Langewiesche describes Melisi as a gentle, effacing, altruistic man (22-23), a small, wiry man, with "a disarming way of suggesting his opinions rather than asserting them." (96). Melisi also tended to be shy, a trait that distinguished him in the "wolf-pack world of the Trade Center site" (96). He exuded a unique moral authority: "This authority translated into the power to make suggestions that others were willing to follow." (22). By mid-November, people were calling him "Saint Sam" as he assumed the role of mediator among the bickering tribes on the pile (23). He stated clearly to Langewiesche, "My only allegiance is to the people who lost their lives—to their families. The best we can do is try to retrieve as many people as we can in the most human fashion." (146-147). In the end, however, Melisi came under attack by firefighters and their families for his mediation efforts—his willingness to listen to their opponents with empathy and understanding. They felt betrayed, and used Melisi as a scapegoat (202).

Langewiesche's characterization of Sam Melisi is complex. Melisi's persona departs from the hyper-masculine image of the hero firefighters at Ground Zero, and features attributes and abilities traditionally associated with femininity. With these gendered attributes, he nonetheless wielded moral authority and power, traditionally the domain of masculinity. In addition, he is consubstantial with construction workers, as well as with firefighters. Such complexity leads us to pose theses questions: To what extent was Melisi's gendered persona correct for the role he played at Ground Zero? That is, had Melisi been more like the other firefighters in temperament and physique, would he have been as successful a mediator? Unfortunately, the organizational theory literature in our texts does not provide us with sufficient gender theory to allow us to answer these questions.

All told, organizational culture theories provide us with a set of conceptual tools for making sense of irrational, destructive human behavior as well as the profoundly effective learning that took place in individuals, groups and the Ground Zero organization as a whole.

Conclusion

Because so much of formal organization theory is grounded with rationality as the critical assumption, we find that much of it—classical, structural, systems, and rational choice—is insufficient to explicate how this organization functioned and acted the way it did. What we are left with is the postulation that it is the more contemporary theories of structure, decision-making, power and politics, and especially organizational culture that provide us with the richest explanatory power.

Specifically, *design* or *contingency* theories, with their organic emphases on flexibility and continual learning, best help us to make sense of organizational structure at Ground Zero. They also allow us to recognize the dialectical tension between the move towards centralization of authority and the continual need for decentralization, local autonomy and individualism. Above all though, we see that these theories optimally describe why the organization emerged as flat, nimble, and responsive to change and uncertainty.

It is also this recognition of uncertainty that leads us to assert that the *garbage can* model is the strongest to account for the decision-making structure used by the DDC to clean up the disaster and return the city to a state of normalcy. Essentially, inputs from experts and stakeholders were tossed into a "garbage can" of ideas, and the outputs that emerged were what were needed at the time. The lack of rationality in this situation simply allowed for nothing else.

We also find that, consistent with the literature on the subject, power and politics are not mutually exclusive. Power is manifested in different ways and for different purposes, but is inextricably linked to politics, no matter what form employed. Politics is merely the vehicle through which power is exercised, and *American Ground* provides a rich depiction of it in action.

Finally, it is our assertion that organization culture is a most powerful lens through which we can really understand how and why things happened at the pile the way they did. These theories account for individual and group behavior and transformations that lead to organizational learning, and allow us to describe how irrational processes make this happen. Inasmuch as shared learning affected the structure of the unbuilding organization, it also shaped the culture that emerged. From the component subgroups that erupted into tribal warfare, to the sense of emptiness felt when the last steel girder was ceremoniously hauled away, it is this knowledge of organizational culture that allows those of us external to the intricacies of the situation an insider's view.

Clearly, the events of that fateful day in September of 2001, and those that followed, tested the very limits of established—and not so established—organizational theory. What we find overall is that 9/11 is not a neat, tidy textbook example that fits nicely into a theoretical pigeonhole. Organizational structure, decision making, power and politics, and culture of the WTC unbuilding process can best be explained through a diverse set of theories. This conceptual patchwork is reflective of the organization that emerged from the wafting smoke and mangled mass of steel at the WTC. Yet despite the loose-knit structure and informality of the organization—a situation that defied theoretical convention—it saw to efficient completion a titanic engineering feat—both structural and social—unparalleled in modern times.

Appendix 1 An Overview of *American Ground: Unbuilding the World Trade Center*

Part 1: The Inner World

"The Inner World" was published in July/August 2002 in *The Atlantic Monthly*. The narrative begins with the collapse of Twin Towers at the World Trade Center on September 11, 2001 and a description of the damage to the Port Authority Trans-Hudson Line (PATH), an underground commuter railroad linking New York and New Jersey, as well as the rubble that sunk into the six-story subterranean structures that had been mostly parking garages. Langewiesche pans out to report the damages to other buildings, a fallen pedestrian bridge, and streets that buckled. He depicts the air pressure waves and the winds that dispersed clouds of powder over the terrain. The first hours were apocalyptic: Firefighters, police, and volunteers assembled bucket brigades to remove debris in a frantic search for survivors. Amidst the ineffective action of countless well-meaning individuals, little information was available and rumors abounded.

Who was going to run this show? Certainly not New York City's Office of Emergency Management (OEM); though prestigious, it was not prepared to deal with the disaster. Nor was the Port Authority of New York and New Jersey, the official bureaucracy responsible for overseeing the World Trade Center. Though a bi-state, multi-jurisdictional organization with considerable power and influence, its executive offices in the World Trade Center were destroyed and many of its employees were killed.

In the authority vacuum of 9/11, Kenneth Holden, Commissioner for the New York City Department of Design and Construction (DDC) and his Lieutenant, Michael Burton, acted independently, just as others, doing what they knew how to do. They responded tactically, organizing the arrival of expert engineers and heavy equipment, bypassing ordinary bidding procedures. By nightfall, Holden and Burton had set up heavy equipment and lights, divided Ground Zero into four quadrants, hired four construction companies (Turner, AMEC, Bovis, and Tully), and assigned each to a quadrant of the pile. "They did not ask permission to do this—nor, at first, did anyone pay much attention to their work," (Langewiesche 2002, 66).

After dark on 9/11, available city administrators met in the cafeteria of Public School 89 and Mayor Giuliani made a back-room decision to scrap existing organizational charts, bypassing the city's Office of Emergency Management, to allow the DDC to proceed. City administrators agreed to a crude management structure that night: Replace volunteers with firefighters, police, structural and civil engineers, and unionized construction workers.

The DDC was hardly a contender for managing the clean-up effort and Holden and Burton were uneasy partners. The DDC, as a small, obscure city department with 1,300 employees, was charged merely with overseeing municipal contracts, and, indeed, its reputation extended no further than contract administration. Nevertheless, Holden and Burton emerged as the most effective of those who responded to the initial chaos, and they directed what happened on the pile for the next nine months.

Langewiesche ends part one anthropomorphizing the pile as a living thing: “The pile was an extreme in itself. It was not just the ruins of seven big buildings but a terrain of tangled steel on an unimaginable scale, with mountainous slopes breathing smoke and flame, roamed by diesel dinosaurs and filled with the human dead. The pile heaved and groaned and constantly changed, and was capable at any moment of killing again. People did not merely work to clear it out but went there day and night to fling themselves against it. The pile was the enemy, the objective, the obsession, the hard-won ground” (Langewiesche 2002, 72).

Part 2: The Rush to Recover

“The Rush to Recover,” published in the September *Atlantic Monthly*, opens with accounts of American Airlines Flight 11 and United Airlines Flight 175, then focuses on tactical operations on the pile. We learn background information about Holden and Burton, and their unlikely, uncomfortable partnership, as well as their tactical responses to the terrorism on 9/11. Burton acted quickly, establishing a phone tree to alert the city’s construction industry to be tapped later in the day. By afternoon, Holden and Burton had brought in Richard Tomasetti from the engineering firm Thornton-Tomasetti, along with some tough construction guys. Police blocked their access to the site until 5:30 p.m. when the group finally walked around the site, focusing on how to lift the steel to uncover survivors and how to clear a path to get equipment to the ruins.

We meet Sam Melisi, a fireman experienced in collapsed building and rescue operations, and sense his mediating influence on other firefighters. There are hints of growing tensions between firefighters and police, and between uniformed city employees and the engineers guiding operations. We meet Marty Corcoran, a marine-construction manager with the New Jersey-based Weeks Marine. Corcoran caught up with Burton in the PS 89 cafeteria the evening of 9/11 to share his ideas and schemes for getting the debris from the site to the Fresh Kills Landfill on Staten Island. He proposed that barges could carry the rubble—they were already set up to accommodate the task. Burton gave his approval. Later, we meet George Tamaro who oversaw the construction of the slurry wall for the Port Authority, and we worry with him as he plans the salvage of the slurry wall that threatens to break and flood New York's underground.

After three days of operation, "a raw form of organization" had emerged, with the DDC leading the clean-up effort (Langewiesche 2002, 112). Headquarters were a kindergarten room PS 89, a convenient location where mostly large men sat on tiny chairs, or stood, to plan tactics, coordinate work on the pile, and struggle with the politics of competing organizations and their demands—and the actions of public officials. Peter Rinaldi, Engineer with the Port Authority of New York and New Jersey, manned PS 89 logistics; Chief Engineer Frank Lombardi dispatched him there while he himself worked out of the Port Authority's headquarters in New Jersey. Also on hand was construction executive Bill Cote. In twice-daily meetings with 20 or more government agencies represented, Holden, Burton, Rinaldi, and Cote coordinated efforts and planned tactics. By late October, the operation became a "joint command" between firefighters, police, and the DDC. Risk-taking on the pile was high and dangers ever-present.

Forty downtown blocks of unstable surface with craters, caves, cliffs and remnants of the World Trade Center were visible, while underground, fires burned September through January, causing progressive collapses in the pile until spring. A slurry wall holding New York Harbor at bay threatened to break, and fears of poisonous gases leaking from the pile might have been the final images of "The Rush to Recover," but Langewiesche chose instead to end part two with serenity and irony. He paints the picture of a four-inch blanket of snow that covered the pile. "There was something about the snow—its majestic indifference to human events—that seemed to provide perspective on what was happening here" (Langewiesche 2002, 141).

Part 3: The Dance of the Dinosaurs

"The Dance of the Dinosaurs" is ultimately about the grace of the large equipment that pulled apart the debris. The machines were the stars—they seemed to become living things in the hands of their operators. Big-armed animals clawed at the pile and pulled out steel girders and columns. Large trucks hauled these away on newly created roads to bulky barges. The barges carried some 1.5 million tons of ruins from the 17 acres destruction site some 26 miles to Fresh Kills Landfill on Staten Island for inspection, sorting, and burial on 176 acres. Others carried the steel girders and columns to New Jersey where they were sold in the recycle market. Langewiesche likens the recovery tactics to open pit mining. He recalls the gridlock on the roads, the lack of focus, and the excessive risk-taking and free-for-all emergency responses that continued.

Equally fitting to the title “The Dance of the Dinosaurs” is Langewiesche’s account of the tribal fighting between firefighters and police on November 2, marked by demonstrations, protests, arrests and marches to City Hall to pressure Mayor Giuliani to back down on the engineering effort so firefighters could bring their brothers home. A group of ironworkers, likely union-sympathizers on their breaks, joined the fray and appeared on national television. Giuliani demanded their arrest—an action that Holden and Burton sensed could lead to full-scale rebellion on the pile.

Mayor Giuliani called a meeting on November 12 so that a panel of leaders (David Schaumburg, medical examiner, a fire commissioner, Mike Burton, and Bill Cote from one of the construction companies) could brief firefighters and their families on the deconstruction operations and recovery efforts. Essentially, this rational, information-sharing meeting precipitated an emotional tirade of arguments, complaints and accusations. Widows vented relentlessly, dubbing Burton “Mr. Scoop and Dump” and shouting “Liar, liar” in response to the medical examiner. Burton and Cote retreated from the meeting to consider how the project was a consuming professional experience for them rather than an emotional one: They had not lost friends or family and they had not dwelled on the tragedy. Moved by the suffering of the widows, they saw how others believed their actions were “wrong, even wicked” (Langewiesche 2003, 169). Though Burton would be dubbed “the Trade Center czar,” he realized that night over a cold beer with Cote that he would need to keep his ambitions in check, and that “America does not function as a dictatorship of rationalists” (Langewiesche 2003, 170).

Most controversial is Langewiesche’s report of the arguments that broke out when a fire truck containing jeans was discovered three months after the fall of the Twin Towers. This discovery “greatly exacerbated the frictions on the pile” (Langewiesche 2003, 217) and Langewiesche included this incident because he refused to depict firefighters as heroes more than any other group of workers. The pile was “union ground,” and its workers—firefighters, police and construction workers—were fully human. A few looted, a few loafed, but most responded mightily.

The May 30, 2002 Closing Ceremony was short, with no speeches. An honor guard accompanied a steel column on a flatbed truck from the bottom of the hole as it was taken away. Bagpipes played as firefighters, NYC and Port Authority police, engineers, construction workers, families of the dead and politicians watched silently. This was Mayor Michael Bloomberg’s design for a solemn tribute, just five months into his term.

By mid-summer bare earth covered the site, and man-made hills stood out at the Fresh Kills Landfill. The last of the steel columns and girders were sold, primarily to China and India—to foreign markets where recycling costs are lower than in the United States, and where labor and environmental rules are more relaxed. In describing the fate of the steel wrestled from the ruins of the World Trade Center, Langewiesche introduces an ironic twist: “It was a strangely appropriate fate for these buildings. Unmade or remade, whether as appliances or cars or simple rebar, they would eventually find their way into every corner of the earth” (Langewiesche 2001, 205).

Appendix 2 Names and Titles of Persons Included in *American Ground* (in order of their introduction)

Kenneth (Ken) Holden	Commissioner, New York City Department of Design & Construction
Michael (Mike) Burton	Lieutenant, New York City Department of Design & Construction • “Trade Center Czar” who oversaw practical details of the World Trade Center cleanup
Bill Cote	Construction Executive
John O’Connell	Collapsed Building Specialist
Sam (Saint Sam) Melisi	Fireman with experience in collapsed building and rescue operations • Mediated conflicts between firefighters and police
Peter Rinaldi	Engineer, Port Authority of New York and New Jersey • Assigned to cleanup effort at the World Trade Center
Richard Tomasetti	President, Thornton-Tomasetti Group, Inc. • Firm specialized in the evaluation and analysis of the World Trade Center site
Richard Garlock	Structural Specialist with LERA • Worked for Trade Center’s original designer, Leslie E. Robertson • Led exploration of chiller plant to search for potentially hazardous Freon
Frank Lombardi	Chief Engineer, Port Authority of New York and New Jersey • Worked from New Jersey offices
W. Gene Corley	Engineer from Chicago • Investigator of building failures
Rudolph (Rudy) Giuliani	Mayor of New York City
Apollo Hernandez	Driver for Kenneth Holden
Marty Corcoran	Marine Construction Manager • Suggested removing debris by barges
Pasquale Buzzelli	Engineer, Port Authority of New York and New Jersey • Rescued dramatically
Genelle Guzman	Clerk, Port Authority of New York and New Jersey • Rescued after being trapped for 27 hours with serious injuries

George Tamaro	Engineer • Underground specialist who oversaw construction of slurry wall for the Port Authority
Andrew Pontecorvo and Pablo Lopez	Front line engineers who investigated slurry wall
Lou Mendes	Assistant Commissioner for Special Projects, New York City Department of Design & Construction
David Griffin	Demolition consultant for standing buildings • From Greensboro, North Carolina • Hired by Bovis
David Schomburg	Medical Examiner assigned as principal liaison to Trade Center
Michael Bloomberg	Mayor of New York City
TURNER, AMEC, BOVIS, TULLY	Construction companies that oversaw the cleanup of the Trade Center • TULLY was a family-owned New York City paving contractor with lots of equipment

References

Acker, Joan. 1992. Gendering Organizational Theory. In *Classics of Organizational Theory*, 5th ed. by Jay M. Shaftritz and J. Steven Ott, 391-399. New York: Harcourt Publishers.

Argyris, Chris, and Donald Schon. 1978. Organizational Learning: A Theory of Action Perspective. In *Organizational Theory: A Public Perspective*. 2d ed. Harold F. Gortner, Julianne Mahler, and Jeanne Bell Nicholson, 121. New York: Harcourt Brace College Publishers.

Burns, Tom and G. M. Stalker. 1961. Mechanistic and Organic Systems. In *Classics of Organizational Theory*, 5th ed. by Jay M. Shaftritz and J. Steven Ott, 201-205. New York: Harcourt Publishers.

Cohen, Michael, James March, and Johan Olsen. 1979. Ambiguity and Choice in Organizations. In *Organizational Theory: A Public Perspective*. 2d ed. Harold F. Gortner, Julianne Mahler, and Jeanne Bell Nicholson, 250. New York: Harcourt Brace College Publishers.

Cook, Scott D. N. and Dvora Yanow. 1993. Culture and Organizational Learning. In *Classics of Organizational Theory*, 5th ed. by Jay M. Shaftritz and J. Steven Ott, 400-413. New York: Harcourt Publishers.

Fayol, Henri. 1916. General Principles of Management. In *Classics of Organizational Theory*, 5th ed. by Jay M. Shaftritz and J. Steven Ott, 48-60. New York: Harcourt Publishers.

French, Jr. John R. P. and Bertram Raven. 1959. The Bases of Social Power. In *Classics of Organizational Theory*, 5th ed. by Jay M. Shaftritz and J. Steven Ott, 319-328. New York: Harcourt Publishers.

Gortner, Harold F., Julianne Mahler, and Jeanne Bell Nicholson. 1997. *Organizational Theory: A Public Perspective*. 2d ed. New York: Harcourt Brace College Publishers.

Gulick, Luther. 1937. Notes on the Theory of Organization. In *Classics of Organizational Theory*, 5th ed. by Jay M. Shaftritz and J. Steven Ott, 79-87. New York: Harcourt Publishers.

Langewiesche, William. 2002. *American Ground: Unbuilding the World Trade Center*. New York: North Point Press.

Louis, Meryl Reis. 1980. Surprise and Sense Making: What Newcomers Experience in Entering Unfamiliar Organizational Settings. In *Classics of Organizational Theory*, 5th ed. by Jay M. Shaftritz and J. Steven Ott, 377-390. New York: Harcourt Publishers.

Merton, Robert. 1957. Bureaucratic Structure and Personality. In *Classics of Organizational Theory*, 5th ed. by Jay M. Shaftritz and J. Steven Ott, 103-111. New York: Harcourt Publishers.

Mintzberg, Henry. The Five Basic Parts of Organization. In *Classics of Organizational Theory*, 5th ed. by Jay M. Shaftritz and J. Steven Ott, 222-233. New York: Harcourt Publishers.

Perrow, Charles. 1967. A Framework for the Comparative Analysis of Organization. In *Organizational Theory: A Public Perspective*. 2d ed. Harold F. Gortner, Julianne Mahler, and Jeanne Bell Nicholson, 123. New York: Harcourt Brace College Publishers.

Peters, Thomas J. and Robert H. Waterman, Jr. 1982. In Search of Excellence: Loose-Tight Properties. In *Classics of Organizational Theory*, 5th ed. by Jay M. Shaftritz and J. Steven Ott, 446-450. New York: Harcourt Publishers.

Peters, Thomas J. and Robert H. Waterman, Jr. 1982. In Search of Excellence. New York: Warner.

Pfeffer, Jeffrey. 1981. Understanding the Role of Power in Decision Making. In *Classics of Organizational Theory*, 5th ed. by Jay M. Shaftritz and J. Steven Ott, 304-318. New York: Harcourt Publishers.

Schein, Edgar H. Schein. 1993. Defining Organizational Culture. In *Classics of Organizational Theory*, 5th ed. by Jay M. Shaftritz and J. Steven Ott, 369-376. New York: Harcourt Publishers.

Senge, Peter M. 1990. The Fifth Discipline: A Shift of Mind. In *Classics of Organizational Theory*, 5th ed. by Jay M. Shaftritz and J. Steven Ott, 451-459. New York: Harcourt Publishers.

Shafritz, Jay M. and Steven J. Ott. 2001. *Classics of Organizational Theory*. 5th ed. New York: Harcourt Publishers.

Taylor, Frederick Winslow. 1916. The Principles of Scientific Management. In *Classics of Organizational Theory*, 5th ed. by Jay M. Shaftritz and J. Steven Ott, 61-72. New York: Harcourt Publishers.

Weber, Max. 1922. Bureaucracy. In *Classics of Organizational Theory*, 5th ed. by Jay M. Shaftritz and J. Steven Ott, 73-78. New York: Harcourt Publishers.