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Project management, governance, and the normalization of deviance☆

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Abstract

The term "normalization of deviance" was coined by sociologist Diane Vaughan (1996) based on her study of the culture of NASA prior to the Challenger disaster. This concept continues to reverberate within organizational settings, as companies grapple with employee behaviors that are often counter-productive to achieving organizational ends but are often so hidden or "normal" that organizational actors are either unaware of them or assume that this behavior is a natural part of the project management process. Using results from interviews with 21 project managers, we will consider how normalization of deviance affects project management practices in the areas of: 1) project proposals and strategic misrepresentation, 2) client/contractor relationships, and 3) planning and scheduling dynamics. Finally, the paper examines the role of organizational learning and corporate governance in identifying and subsequently, minimizing the negative impact of normalization of deviance behaviors on project-based work.

Keywords: Governance; Planning errors; Organizational learning; Deviance

1. Introduction

On January 28, 1986, the Challenger blew up in midair, 73 seconds after it had lifted off from NASA's Cape Canaveral launch facility. Subsequent pain-staking analysis determined the cause of the disaster was leaking O-ring seals on the solid rocket boosters, manufactured by Morton-Thiokol. Thiokol engineers had determined as early as 1981 that there were problems with the putty used to seal the O-rings. During take-off, gases from inside the boosters would find weak spots in the putty, boring holes into the O-rings themselves. After experimenting with various options, Thiokol changed the putty and method of application and considered the problem fixed. Although engineers for NASA and Thiokol knew that erosion in the O-ring joints continued to occur, and that based on subsequent test flights, the joints "deviated from expected performance" (Vaughan, 1996), the decision was made to go ahead with the launch, with tragic results. "As [NASA and Morton-Thiokol] recurrently observed the problem with no consequence they got to the point that flying with the flaw was normal and acceptable" (from Villeret interview with Vaughan, 2008).

A second space shuttle, Columbia, experienced its own disaster in 2003. Since first entering service in 1981, the Columbia had made 28 successful flights, accommodating a total of 160 crew members and orbiting the earth 4,808 times. On February 1, while attempting to reenter the atmosphere, the Columbia's heat shield failed and the shuttle was totally destroyed. The cause was attributed to the loss of critical heat shield tiles on the underside of the shuttle, dislodged as a result of pieces of the foam insulation on the external fuel tanks breaking off and striking the shuttle during takeoff. In its more than two dozen launches over a 22-year career, there had been dozens of reported cases of foam insulation strikes against the fuselage of the shuttle. Engineers and officials at NASA had come to expect these occurrences and minimized their impact on the vehicle.

More recently, on January 13, 2012, the Carnival cruise ship *Costa Concordia* crashed into rocks off Giglio Island, on the Italian coast. This disaster killed 32 of the 4,252 passengers on board. The sinking has been attributed to gross negligence of the Captain and crew. Captain Francesco Schettino first decided

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to go on an unapproved course because it was a tradition for cruise ships to pass the island closely. Prosecutors found that the ship was cruising too close to the island in a "ship salute" publicity stunt before it rammed into the submerged rocks. According to later reports, Carnival's directors "not only tolerated, but promoted and publicized the risky ship salutes off Giglio and other tourist sites as a convenient, effective marketing tool" (Vogt, 2013). In other words, passing closely created a spectacle for the people on the shore. This behavior was the norm, with each captain deviating from the approved path.

What do these examples have in common? Each of them point to a phenomenon that is all-too-common in many organizations; a tolerance for deviation. The term "normalization of deviance" was first coined by Diane Vaughan, a sociologist who studied the Challenger disaster and found a series of missteps, flawed assumptions, and a culture of risk-taking. "Social normalization of deviance means that people within the organization become so much accustomed to a deviant behavior that they don't consider it as deviant, despite the fact that they far exceed their own rules for the elementary safety" (from Villeret interview with Vaughan, 2008). More insidiously, Vaughan's work has found that people grow more accustomed to the deviant behavior the more it occurs. Put simply, normalization of deviance suggests that *the unexpected becomes the expected, which becomes the accepted* (Pinto, 2006). Thus, one phenomenon of this normalization of deviance is that while a series of behaviors may appear deviant to people outside the organization, for personnel within the firm, the deviance often goes unrecognized; that is, it is simply assumed to be normal occurrence. It is usually only with hindsight that people within an organization can realize that their seemingly "normal" behavior was, in fact, deviant (Vaughan, 1999, 2004; Vaughan et al., 2005).

Part of the challenge in recognizing and addressing normalization of deviance is the role that the "gradualism" phenomenon plays in promoting these concerns. As Starbuck and Milliken (1988) pointed out, in the wake of the Challenger disaster, acclimatization to "deviance" behavior occurs as a process of steps, sometimes over an extended period. The unacceptable behavior does not occur all at once, but rather, may serve as the summation of multiple decisions made or avoided, with no visible or discernible negative effects. Thus, the potential for catastrophe is never envisioned as an option until it occurs. In a project setting, we see gradualism occur in scope adjustment, safety standards modification, or incremental changes to plans and other control documentation (Eden et al., 2005; Winch, 2013) and often experience the effects that gradualism plays in ballooning project costs and schedules. As Winch (2013) noted, a constructivist perspective yields a number of causes of project escalation – many involving elements of gradualism – including strategic misrepresentation, "endgaming," "governmentality," culture, and escalation of commitment on major projects (Clegg et al., 2002, 2006).

It is also important to distinguish between the concepts of "deviation" and "normalization of deviance" as they relate to project development (Bourrier, 2005). It is commonly understood that projects are prone to deviation during the development process, as specific technical, commercial, or environmental issues can lead to nonconformity with the expected standards (c.f. Geraldi et al., 2010; Hallgren and Soderholm, 2010; Morris and Hough, 1987). Deviation from plan, for example, may be a "normal" element in the development of most projects and our response to these deviations – efforts to "stabilize the situation" (Hallgren and Soderholm, 2010) – can be viewed as an important, but relatively commonly-applied component of the project development process (Jin and Levitt, 1996; Orr and Scott, 2008). The critical nature of deviation in this sense lies in assessing how effectively an organization reacts to unexpected events; i.e., how quickly they are able to get a project back on track with minimal lost time or expense. Normalization of deviance, on the other hand, is a mindset that the organization's actors adopt as cultural norms during the project development cycle. This behavior anticipates errors but more critically, it seeks to reduce perceptions of these errors to normal operating procedure. When "the unexpected" fully migrates to "the accepted," the danger for organizations is that they have rationalized away destructive behaviors or created an environment where deviance is permitted to thrive.

We see reported examples of the normalization of deviance phenomenon in multiple industries and professions including engineering (Gerstein, 2008), medical care (Banja, 2010; Green, 2004; Prielipp et al., 2010), and industrial and financial organizations (Ashforth and Anand, 2003). Although widely observed, normalized deviance differs from the more commonplace nature of organizational accidents due to engineering overreach (Petroski, 1992) or other design or development failures. Errors, particularly due to unexpected risk factors (e.g., "unknown-unknowns") will continue to remain a part of organizational life despite firms' attempts to identify and therefore minimize their effects as much as possible, leading to the "normal accidents" which are the price paid for the failure to jointly design technology and organization (Perrow, 1999). Further, some risks are accepted as a process of rational cost-benefit analysis, as has been argued to have occurred with NASA's decision to launch Challenger in the face of technical concerns. In this case, technical risk was outweighed by political risk, where NASA faced tremendous pressure to carry out missions to support the image they had created that space flights had become both routine and a profitable enterprise through contracting for satellite launches (McConnell, 1986). Normalization of deviance represents a cultural attitude that consciously creates conditions in which mistakes are made; in effect, it provides a perfect petri dish environment for corporate (or project) misbehavior. As Vaughan (2005) notes, with normalization of deviance, individuals, teams, and organizations repeatedly drift away from what are acceptable standards of practice until the drift has become the norm.

The project management literature is replete with research on the causes of project failure. It is helpful, therefore, to contrast the pathologies that can lead to cost or schedule overruns, technical failures, cancelations, and other negative results and the more insidious dynamic of normalization of deviance, as it applies to project management. Researchers have examined numerous issues that can derail projects, including identifying "decision traps" in project development (Van Oorschot et al., 2013), political issues (Levine and Rossmoore, 1995), bureaucratic red