1. Introduction

Escalation of commitment – the continued investment in failing initiatives [36] – is an enduring problem for IS development. This is because IT projects inevitably entail uncertainty involving equivocal information about project status, volatile requirements, and inadequate assessments of benefits [16]. Despite the considerable attention to the topic in the literature, without the benefit of hindsight, distinguishing “good” commitment (visionary leadership) from “bad” commitment (escalation) in the face of negative feedback has been a persistent challenge.

We hold that such limitations are rooted in the fundamental assumptions of a “disembedded,” economic view of rationality [40] implied in prior escalation research. In empirical studies of escalation, the treatment of political, cultural, and institutional pressures has typically been limited to explaining violations of the efficiency-based imperatives assumed in decision-making [15]. However, if we consider that escalation decisions actually reflect an “embedded rationality” [27, 40] – which emphasizes rational action based on institutional, contextual, and situational factors – the view of decisions as violations of rationality erodes.

In this paper, we embrace the concept of embedded rationality to explore how social context shapes decisions concerning IT project commitment. We analyze and recast three published case studies on escalation decisions [24, 23, 20] from this perspective. We find that contextual factors such as legitimacy and momentum reinforce IT project persistence, in effect institutionalizing projects over time. According to this formulation, escalation is not the paradoxical exception associated with failed IT projects, but rather, the norm once a project is institutionalized. Further, we find evidence of three “rationalities” that can characterize decision-making in IT project contexts: efficiency, technical, and innovative rationalities. Each gains and loses salience over the course of the IT project and each acts as the standard within which particular decisions can be considered “rational.”

In the remainder of the paper, we briefly review the literature on escalation; introduce an institutional perspective of embedded rationality; analyze three published case studies; and conclude the paper with a discussion of our findings.

2. Background

At the heart of escalation of commitment is the appearance of a paradox, wherein presumably rational decision makers remain committed to failing projects. Efforts to explain the behavior have spanned multiple disciplines from which a variety of theoretical perspectives have emerged. Some emphasize the cognitive and behavioral biases that subsume norms of efficiency, as explanations based on self-justification [36] and prospect theory [41] suggest. Others, such as those based on agency theory [13] and real options thinking [39], point to rationalized actions that define the criteria of commitment and/or project value. Similar theoretical perspectives on escalation [8, 30] abound in the literature, and the on-going attention to the topic suggests that escalation is a relevant and enduring concern for organizations [37], particularly for those involved in IT project development [16].

2.1. Disembedded, economic rationality

Most existing escalation theories share a common view of organizational decision-making rooted in fundamental assumptions of economic rationality. According to Townley [40], economic rationality suggests that rational action by goal-directed, self-interested, and calculating individuals is determined by the value of decision outcomes resulting from efficiency-based, cost-benefit comparisons between alternative actions. Such assumptions are clearly evident in the seminal works. Staw and Ross [38, 28], for example, propose an escalation “prototype” that depicts a simple decision model through which the emergence of negative feedback elicits a reexamination of an ongoing project. Project commitment is determined by its perceived costs and benefits. Reevaluation criteria “can no doubt be
dictated by objective economic features of a project, but at the same time it is also likely that psychological, social, and structural variables are important forces” [38, p.63]. This framework is the foundation for much of contemporary escalation research [4,15, 24].

In general, then, an economic rationality underlies the bulk of escalation theorizing by informing the goal-directed, decision-centric, and outcome-oriented nature of organizational decision-making. The very conceptualization of escalation contrasts commitment to a project with universal norms of efficiency. Under this view, escalation, at its core, represents a paradox that merits explanation and has led to the commonly held view that escalation ultimately reflects “very bad business investment” decisions [15].

Nevertheless, whether escalation is actually the result of poor decision-making – and not “visionary leadership” – is unclear. The central issue is that escalation behavior, itself, is not sufficient for predicting project failure. Indeed, past studies indicate that successful IS development often depends on persistent project commitment, even under conditions of high uncertainty [18, 24]. Yet a conceptual means for distinguishing “good” from “bad” commitment within a project context has not developed in prior escalation theorizing, nor has post hoc, retrospective empirical investigation of failed or abandoned initiatives informed the distinction (e.g., [15, 24, 20]). As such, normative theories of escalation have not yet emerged, and a clear picture of how, when, and why escalation occurs in organizational contexts has remained elusive [12]. In an attempt to rectify this situation, we next present an institutional perspective that emphasizes the embedded nature of rationality associated with commitment to IT projects.

2.2. Institutional thinking

Much of the equivocality of prior escalation research reflects the limitations of economic rationality for explaining organizational behavior. In broader organizational research, critics of the economics-based view of organizations generally point to unrealistic assumptions regarding 1) the hyper-rationality of efficiency maximizing decision makers; 2) the primacy of competitive forces driving efficiency-based objectives; and 3) the lack of institutional pressures on decision-making [27]. As Townley states, an economic rationality cannot explain why organizations “often follow purposes and objectives which do not make strict economic sense; that structures, systems, and purposes are rarely designed and often fail to achieve stated intent or purpose” [40, p.27]. The central criticism is that a “disembedded and disembodied” economic rationality – “founded on reason as universal and impartial, removed from local circumstance” [40, p.90] – fails to address the means through which social context influences organizational behavior.

Such limitations have largely given rise to the proliferation of institutional perspectives in organizational research, which emphasize decision rationality based on the influence of the rules and resources afforded by the broader environment [33]. In contrast to hyper-rational views of organizations, then, institutional theory attempts to explain the influence of factors comprising complex, socially embedded environments on organizational behavior.

2.2.1. Institutional theory

Institutional theory [10, 26] emphasizes the way that many organizational decisions have a taken-for-granted quality consistent with what is widely held to be legitimate within an organization [27]. This does not mean that the decision is somehow irrational. Instead institutional theory emphasizes the way that rationality is couched, or “embedded,” in the organizational context, which is rife with history, culture, and political dynamics [40].

Isomorphism, which refers to the constraining process that pressures one unit to resemble others that face the same set of environmental conditions [10], is an important concept associated with institutional theory. Such constraints may encourage conformity to standards established by interdependent structures (i.e., within the organizational field) and can occur in the absence of improved economic efficiency [10]; in some cases, firms may forgo direct economic gains to pursue other rewards for being similar to others in their field (e.g., through increased legitimacy and social acceptance [9]). In essence, institutional theory describes the processes through which institutional processes may subsume economically rational forces in such a way as to “set the rules of rationality” [32].

2.2.2. Embedded rationality & escalation

An institutional perspective highlights socially constructed, legitimacy-driven organizational action [40]. It typically contrasts this action to decision-making narrowly rooted on efficiency-maximizing grounds, but it is important to note that institutional and economic rationalities are not mutually incompatible. Rather, to the extent that organizations operate in both competitive and institutional environments, rational action occurs within the context of the institutions that enable and constrain those decisions [27]. Transaction-cost economics, for example, has acknowledged the role of institutional influences embedded in organizational decision environments [43].

In contrast, although escalation has been generally characterized as a social phenomenon [11], escalation theorists have been slow to fully embrace institutional
thinking. This is not to say that escalation researchers have altogether ignored the potential influence of institutional pressures. Several studies, for example, emphasize the social determinants of escalation based on behavior modeling (e.g., [29, 5]) and cultural norms of consistency [38, 29, 15], which evoke the isomorphic pressures underscored in institutional theory [10]. However, in many such cases, institutional thinking has been limited to explaining the discrete influence of a narrow set of political, organizational, and cultural factors – within an efficiency framework – that defy characterization in economically rational terms. As a result, a clear understanding of the role of institutional environments in project commitment decisions remains underdeveloped in the literature.

Institutional theorists, on the other hand, envision a much broader institutional environment that includes a range of cognitive and social elements [27]. Contrary to commonly held interpretations of institutional theory, an institutional perspective is not limited to examining the broad effects of industry, culture, society, etc. on organizations. While a majority of the research invoking the perspective has certainly emphasized the macro-level effects of organizational fields on organizations-as-actors, the perspective also accommodates the individual and group behaviors that underlie explanations of phenomena at higher levels of abstraction [26]. To the extent that many of these macro-level phenomena are driven by individual action [26], they are linked to individuals that may internalize repeated patterns of behavior that, in turn, become reinforced over time and shared by others. This notion is captured by the concept of institutional logics – the rationales formed by a set of goals, values, and prescriptions associated with a specific institution [1] – which provide a mechanism for linking institutional theory to individual and group behavior. Thus, individuals act rationally according to logics “embedded in a context of goals and taken-for-granted assumptions that are situated within a particular institutional context” [1, p. 5].

An explicit emphasis on the embedded nature of rationality may help elucidate the commitment to troubled IT project development. By moving beyond decision-making based on strict considerations of a universal economic rationality, an institutional analysis captures the legitimizing elements associated with organizational action that may help to distinguish “good” commitment from “bad” escalation with respect to the standards that are salient in a given situation. Thus, in the following section, we further explore this idea by applying institutional thinking to re-imagine the role of the IT project, itself, as an important actor in the social processes influencing organizational decisions.

3. IT Project institutionalization

An institutional perspective of IT project commitment underscores the fundamental idea that IT projects and the practices surrounding them can become “infused with value beyond the technical requirements at hand” [34] – that is, institutionalized – within organizations. In essence, we suggest that, over time, institutionalized fields can emerge around IT projects, subsuming them within a network of connected and structurally equivalent actors and practices [10]. According to DiMaggio & Powell [10], institutionalized fields arise from 1) the increased interaction among actors in a field; 2) the emergence of sharply defined patterns of coalitions; 3) an increase in the information load with which actors in the field must contend; and 4) mutual awareness among participants that they are involved in a common enterprise. Institutionalized fields can develop around IT projects within organizations in a similar way – with widespread recognition as such among individual actors involved in the project. Just as organizations can be more or less institutionalized [22], we suggest that IT projects, too, are subject to varying degrees of institutionalization.

Similar to organizations [10], then, actors involved in projects are constrained by the institutional environment surrounding the project. While early supporters of innovation – in this case, the IT project – may be driven by broadly understood economic performance improvements, as institutionalized fields emerge around the project, commitment to the project may become legitimized and, thus, “normatively sanctioned” [10]. As such, the legitimacy of project commitment is rooted in its institutional environment through the context-specific rationales driving commitment behavior.

4. Case analyses

To explore how institutionalized fields may develop around projects, and how on-going commitment may become legitimized through rationalities embedded in these contexts, we examine three published case studies on commitment to troubled IT projects. For each, we summarize key observations drawn from the original data, and, through an institutional perspective, offer a reinterpretation of the factors influencing project commitment.

Because of the widespread growth in qualitative research in recent decades, there has been increased attention to the value of analyzing published, qualitative studies as primary data for research studies
[31]. Noblitt & Hare [25] indicate that published qualitative case studies can be re-interpreted, and this interpretation can be synthesized with analyses of other published case studies. In this tradition, we present our analysis as a re-interpretation of the Centco case [24] and a subsequent synthesis of this interpretation with the NDS and DIA cases [20, 23]. These studies were chosen because they offer (1) longitudinal analyses of escalation; (2) rich data presentation; and (3) a range of scenarios: escalation (NDS), de-escalation (DIA), and both (Centco).

4.1. Centco case

Newman & Sabherwal’s [24] longitudinal case study examines the 17-year development of a large materials management system for the Supply Division at Centco. The new system was intended to replace a “mishmash” of non-integrated systems, to which “gross inefficiencies and waste” had been attributed in 1974. Within a year, Ian, a “respected” Supply manager, and Derek, an outside systems consultant, recommended a 13-phase in-house development of a sophisticated, integrated materials management system. While the new VP for Supply (Brian) viewed the approach as “a good way of reorganizing the department”, it met immediate resistance from Management Information Services (MIS), a headquarters function that “had established a clear pattern of leading IS projects for other departments.”

Jake, a “powerful” member of MIS, proposed the use of an external software package, which Ian accepted. Jake then hired a systems analyst (James) who was “a particularly business-oriented professional, which was in contrast to the technical orientation” of MIS members.

Following a lengthy search, James and Ian recommended the TRES system. Although the package was untested and had neither the functionality nor integration of the original in-house solution, projected returns were favorable (NPV $11.7M, $4M investment over five years), and Centco president (Blake) eagerly approved the project. Despite questions concerning the 2-1/2 year timeline and objections from the “more conservative” VP of operations (Graham), Blake believed “the potential benefits justified the risk of buying a system that was not yet working.”

Over the next two years, Ian coordinated up to 35 users across various departments (in addition to the Supply staff) and several analysts from TRES. Ian and James also demanded key personnel be pulled from other TRES sites, to which TRES agreed. The project team interviewed 500 Centco employees, and by 1977, a 1500-page information requirements phase was completed and signed off by managers in each functional area. Around this time, both Blake and Brian (VP Supply) left their positions and were replaced by Graham (former VP operations) and Dave, respectively.

Despite $2.3 million in direct costs, however, the TRES implementation was eventually abandoned due to an increasing lack of confidence in TRES’s ability to deliver a working system. Project manager Jake was subsequently fired, and Ian once again explored alternative solutions. Following a fruitless search, Ian again proposed an in-house development. This time, however, MIS was preoccupied with another project, and the in-house Materials Distribution System (MDS) was approved with little resistance. While MDS was no longer an integrated system, it was still considered a significant improvement over Supply’s existing systems. Over the next several years, Jake (MIS) imposed new requirements that Supply conform to a corporate business model that would effectively prolong systems development (11 phases over 8-10 years at a cost of $10 million).

Shortly after, Supply’s new materials management director (Will) introduced a new package from external developer ASI. In 1984, Ian, who was pulled from in-house development to thoroughly assess the viability of the package, determined that ASI fit 84-85 percent of Supply’s needs, and, in contrast to TRES, was already used by 400-500 companies. In 1986, the contract for the ASI system was signed with a project completion of two years, based on a similar size system implemented elsewhere.

Despite its initial promise, the ASI system encountered similar difficulties as TRES. Namely, the decision to implement an untested, incomplete IMS version over the proven CICS version – motivated by recommendations by MIS based on technical considerations – resulted in “hundreds of problems.” Meanwhile, MIS continued to impose technical standards on the system that “caused Supply a great deal of extra effort”. By 1987, these problems were compounded by “major financial difficulties” and the ongoing deregulation of Centco’s industry, which increased uncertainty associated with new competitive pressures. In late 1987, new Supply VP Bob temporarily halted work, appointing a new PM (Trevor) to replace Ian. Based on Trevor’s recommendations, Centco bought out the ASI contract to explore in-house modification of the existing ASI software. Trevor and Ian re-justified the system. While the original ASI implementation showed a net present value of $4M over five years for an investment of $18M, the new plan produced an NPV of only $2M with a $35M investment. Nevertheless, the plan was approved, and Trevor divided the project into five phases to reduce risk and ensure functionality. In 1991, the final system phases were successfully implemented, and the staff effectively used the system.
All told, the project development spanned 17 years and encountered multiple setbacks, including technical failures, diminishing projections of financial returns, turnover among key managers, and disagreement over which strategies/technologies to use. We explain this enduring commitment as a product of the multiple, legitimizing decision rationalities embedded in the institutionalized environment surrounding the project.

4.1.1. Centco project as institutionalized field

To begin, the case data summarized above suggests the emergence over an approximate three-year period (1974-1977) of an institutionalized field surrounding Centco’s IT project. First, there is evidence of increased interaction among those involved in the project. Although the inefficiencies of the existing systems used by Supply were initially identified by a limited number of actors, other participants from multiple departments within Centco, as well as consultants and analysts from external vendor firms, became increasingly involved at various stages of project development. The information requirements phase, for example, involved coordination among 35 users, the Supply staff, and external analysts, and the collection of data from 500 employee interviews. Second, it is likely that the increased interaction resulted in a mutual awareness among participants of involvement in a common enterprise (i.e., new systems development). Third, the organizational boundary itself reflects a sharply defined pattern of coalition formed around the project, which also came to include outside actors (i.e., consultants and vendor participants). Finally, the complexity and magnitude of the project inherently required a significant increase in information load among participants (e.g., the 1500-page information requirements document).

4.1.2. Centco & multiple rationalities

Within the institutionalized field, we highlight the interplay of several countervailing and context-based rationalities that influenced commitment decisions at Centco. For example, an efficiency-based rationality initially motivated the need for an integrated materials management system and also defined the ongoing practical functional requirements of the Supply Division. In contrast, technical and bureaucratic rationalities motivated the attitudes and behavior of managers in MIS, for which the developing system’s technical compliance with organizational standards and conformity to established practices was imperative. Similarly, while the Supply VP supported the original in-house development proposal as an effective means for change and reorganization, MIS viewed it as a threat to the stability of established (and successful) internal practices. Furthermore, the initial approval of TRES was driven by the innovation-oriented and explorative rationale of then-president Blake, who overrode the more conservative recommendations of Operations VP Graham.

4.1.3. Centco: Institutionalization

In light of our above interpretation, we argue that the materials management systems project at Centco had become institutionalized by the conclusion of the information requirements phase in 1977, such that commitment to the various projects, based on multiple embedded rationalities, had become normatively sanctioned. Even prior, several factors suggest the initiation of a legitimized pattern of commitment that persisted throughout subsequent decision events. For example, Ian’s status as a respected manager, the investment in consulting services (Derek), and the creation of a new systems analyst position (James) were all legitimizing factors that were likely to have motivated the quick authorization of the TRES implementation by Centco’s president.

Following the failed TRES implementation, there appears to be evidence that commitment to Centco’s IT project was “taken for granted” in later years. In general, there was a fundamental shift in overall attitude toward the project among its various participants. That is, key actors remained committed to successive implementations of less capable, non-integrated systems whose incremental functionality gains stood in stark contrast to the initial goal of developing a fully functional, integrated materials management system. At the same time, the once promising financial returns (NPV $11.7 million, $4 million investment for TRES) gave way to significantly lower return projections for subsequent implementation attempts (NPV $4 million, $18 million investment for ASI; NPV $2 million, $35 million investment for modified ASI). Thus, over time, the project, once viewed as the peripheral means for addressing efficiency-goals, became widely perceived as the central objective, itself – targeted through a number of different tactics involving various approaches (in-house vs. external development) and technologies of increasingly limited functionality and economic performance (e.g., TRES, MDS, ASI).

4.2. NDS case

Mähring & Keil’s [20] in depth case study of the New Deposit System (NDS) project in a mid-sized European bank (MiddleBank) examines the 3-year development process that was “ultimately halted through a successful redirection of the project” (p.240). NDS was intended to address the increasing technical deficiencies of a legacy system characterized as a “patchwork of modules,” to which repeated customer problems were attributed. An initial feasibility study for NDS was conducted by
“management and experts from the IT department as well as from the business development department,” which yielded a positive outlook. Confidence in the IT department, who framed the project as “necessary and urgent”, along with assurances that NDS conformed to the “existing model [for IT project work]”, led to the project’s quick approval by the CEO-chaired corporate IT board.

Despite widespread support for the overall project charter, there was immediate disagreement over the specific approach to be used for NDS development. Three diverging views emerged: reverse-engineer a new system based on the functionality of legacy systems; build NDS from scratch to develop a flexible “system ‘for the 21st century’”; or modify the existing system. Following an extended period of conflict, the approach “gradually drifted toward the most ambitious alternative, building a new system from scratch.”

Requirements determination, however, continued to be problematic, which led to the recruitment of additional user representatives. As costs mounted, subsequent recommendations by non-IT personnel, including a more conservative, stage-based project investment plan recommended by the executive VP, were repeatedly dismissed by IT managers and the project steering committee. Even amid prolonged delays and rising costs, a meeting of the steering committee “was not as much designed to offer alternatives, as to recommit key actors to the current course of action,” and “the information presented to the committee was geared toward facilitating a decision to continue the project.” Approval for continuation was not initially unanimous; only after additional analyses outlining cost savings over alternative plans was NDS continuation unanimously approved.

However, due to increasing NDS costs and “intense pressure from the CEO-to-be to curtail overall IT costs”, the IT director soon withdrew support from NDS in favor of modifying legacy systems – a move met with “surprise and astonishment” by the steering committee. The project was subsequently redirected and would involve major changes to project management procedures and a reduction in nonessential system functionality. The new system was successfully implemented a short time later.

4.2.1. NDS project as institutionalized field

Similar to Centco, we find evidence that the systems project at Middlebank, reflected by the overall project charter (and not NDS, itself), had become institutionalized at a relatively early stage. By the time NDS was first approved, and certainly during the requirements determination, interaction among a number of people across several departments had increased. In addition, despite early disagreement over specific tactics, all participants appeared to be mutually aware of the need for improved systems performance. Furthermore, information load among participants also increased, through both the diffusion of findings from the initial feasibility report and additional information acquired throughout the prolonged requirements determination phase.

4.2.2. NDS & multiple rationalities

Again, as with Centco, we identify several competing rationalities surrounding project development at Middlebank that suggest that commitment had become legitimized and, thus, normatively sanctioned. Initially, technical considerations informed the need for NDS as a solution to the instability of the legacy system. In contrast, early support from non-IT managers was based on confidence in the IT project manager and assurances that NDS conformed to the IT-related bureaucratic practices of the organization. The existence of multiple rationalities is perhaps most clearly illustrated in the three distinct approaches for implementing the overall project charter, which ranged from the innovative, future-oriented explorative rationality of building a new system from scratch (i.e., NDS) to the more conservative, incremental, and exploitative rationality of renovating the existing legacy system. Even after the NDS option was selected, conflicts between non-IT managers concerned with cost and efficiency and IT personnel motivated by adherence to technical and bureaucratic standards repeatedly emerged.

4.2.3. NDS: Institutionalization

Our interpretation of the events involving systems development at Middlebank suggests that once the overall project charter had become institutionalized, there was a distinct shift during which the imperative to build a new system eventually gave way to the relatively conservative approach of renovating the legacy system. Although the development process did yield “a reliable deposit system that is still in operation”, it was likely no longer viewed as “the cornerstone of the future systems infrastructure of the bank”, as initially endeavored. As such, the imperative to complete the project, in general, grew at the expense of original objectives.

4.3. DIA automated baggage system case

In contrast to both Centco and NDS, the process involving the abandoned automated baggage-handling system at Denver International Airport (DIA) examined by Montealegre & Keil [23] is an example of de-escalation. Shortly after the start of construction of DIA in 1991, project leaders and city officials recognized the potential benefits of a fully automated
IT-based system. From the start, the automated system was regarded as extremely ambitious, never before implemented at such a scale, and there was no evidence from both internal and external analysts that such a system was technically possible or financially viable. A request for proposals yielded limited options, which were rejected in turn by outside consultants “on the grounds that the configurations would not meet the airport’s needs.” At the same time, BAE Automated Systems, Inc. was already involved with developing a similar, yet smaller scale, system for the United Airlines terminal and was reputed as a superior baggage system builder. The city soon contracted BAE to develop an airport-wide system, and the Mayor heralded the airport as vital to the interests of Denver: “The airport is our port, our passport to the future in terms of commerce and trade” [19].

Despite severe technical problems and massive cost overruns, which delayed the airport’s opening on four separate occasions, the system was never successfully implemented. Yet, commitment to the project persisted for several more years. Eventually, city officials relented to pressures from outside consultants, federal agencies, special task forces, and local stakeholders by approving the construction of an alternative, conventional baggage system - a decision directly motivated by reports suggesting that the economic viability of the airport, itself, was in jeopardy. The new low-tech system was portrayed as a “temporary” solution that would enable the airport to open and would serve as a back-up system once BAE was completed. This despite observations (from a United official) that the manual system “required modifications to physical spaces and equipment that would make it impossible to ever integrate it with the BAE system.” By the time the airport opened in 1995, 16 months late and $2 billion over budget, the BAE system was effectively abandoned.

4.3.1. DIA project as non-field

The framing of the BAE case as an example of de-escalation does not preclude the notion that the project had become institutionalized, at least to some extent. To the contrary, Montealegre & Keil conclude that commitment to the failing BAE project was based on a pattern of behavior “believed to be more difficult to break when projects become institutionalized.” Moreover, the authors explicitly state that the ultimate abandonment of the BAE system resulted from the successful de-institutionalization of the project. However, the authors fall short of addressing the process through which project institutionalization may have occurred. Thus, while we clearly agree with their concluding insights, we also believe that explicating the initial institutionalization process is fundamental to an understanding of on-going commitment.

Toward this, we again identify several factors related to the emergence of an institutionalized field around the BAE project. Similar to our other examples, we observe increased interaction and information exchange among key stakeholders involved in the project, including city officials, BAE representatives, and airport project managers. At the same time, the BAE system was somewhat unique in that it was a public, government-sanctioned project subsumed within a larger public initiative (i.e., DIA). Relative to the larger group of DIA stakeholders, then, support for BAE was somewhat limited and eventually became overshadowed by a growing number of detractors (i.e., voting constituencies, outside consultants, federal agencies, government-sanctioned special task forces, etc.). Thus, despite localized support from key decision-makers with considerable political influence, pressures from the broader institutional environment (e.g., state/federal government, the voting public, the popular press) were likely to have been instrumental in eventually derailing momentum for the project.

4.3.2. DIA and multiple rationalities

We agree with Montealegre & Keil’s implication that the automated system had become institutionalized among city officials “as a defining characteristic of the new airport.” Denver Mayor Webb’s support for the ambitious and risky system clearly aligned with his broader vision of the airport as a “passport to the future.” That no such system existed at the time suggests an innovation-oriented rationality, which was clearly reflected early in the development process, whereby city officials summarily dismissed initial reports detailing the infeasibility of the automated system on both technical and economic grounds (i.e., from outside consultants). This pattern of commitment persisted throughout the development process despite repeated indications that BAE was technically incapable and economically unviable. Even as the conventional baggage system was approved and successfully implemented, its portrayal as a temporary back up belied any fundamental change in perceptions among its most influential supporters.

4.3.3. DIA: institutionalization

Here again, that the automated system became institutionalized relatively early on is supported by a shift in overall perceptions surrounding the project. While the initial project was viewed as a means to support the objective of developing of a state-of-the-art airport facility capable of efficiently handling traffic at unprecedented levels, the project was soon legitimized among key decision-makers such that these initial goals were subsumed. By the time BAE
was contracted, the focus on the project had firmly moved to the foreground, as evidenced by the repeated airport opening delays resulting from non-completion of the systems project.

5. Discussion

The idea of project institutionalization, and the resulting momentum for commitment, is not new. Ross & Staw, for example, note that the failing Shoreham nuclear plant “became larger than the organization itself, involving forces beyond the organization’s boundaries” [29. p.719], and became linked to the broader corporate vision “at a relatively early phase of the episode.” Similarly, Keil [15] indicates that IT projects may become perceived as a “sacred cows” that few are willing to challenge, even as negative feedback emerges. Others have acknowledged the “administrative inertia” [38] of commitment associated with “runaway IT projects” [17, 21]. Despite the promise of such insights, a more detailed view of project institutionalization has not been elaborated in the literature.

With regard to the institutional environment, evidence that institutionalized pressures may influence project commitment is also abundant in the escalation literature. A number of studies (including those in our analysis) have identified multiple social, political, cultural, and environmental factors that may encourage escalation behavior (e.g., [24, 15, 12, 21, 20]). However, escalation theorists have typically shared a rather limited view of the institutional environment, invoking institutional theory to explain the influence of a relatively narrow set of “environmental” or “political” factors not easily accounted for by efficiency-based rationales.

As we have suggested, however, an institutional perspective of organizations goes beyond these limited applications, tapping into the fundamental decision rationalities embedded within complex organizational environments that guide behavior. Institutional theory also informs the processes through which institutional fields, and thus institutions, emerge. In essence, our foregoing analysis reflects an attempt to apply these tenets of institutional thinking at the project level. From our reinterpretation of the data based on an institutional perspective, we observe three broad trends across the studies. First, based on the process outlined by DiMaggio & Powell [10], we find that institutionalized fields can emerge around IT projects characterized by the increased interaction, information sharing, and mutual awareness of a common endeavor among project participants. Second, we find that multiple rationalities embedded within the institutionalized field motivate commitment behavior, which over time becomes legitimized and normatively sanctioned. Third, once commitment becomes taken-for-granted and projects become institutionalized, shifts in perceptions and attitudes concerning projects move them from the periphery to a position of central focus among those involved (see Figure 1). It is this shift that allows for a variation in tactics for achieving project development.

![Figure 1: Project institutionalization](image)

Furthermore, during institutionalization the goals of the project are in the foreground and the details of the project – including the project itself – are in the background. The project exists only in the service of the organizational goals that it is expected to fulfill. After institutionalization, however, the project takes a central, taken-for-granted character, and the technologies, goals, and structures are constructed in the service of the project. This figure-ground (gestalt) shift is reminiscent of the way Boland & Pondy [2] reconciled multiple perspectives of organizational activity. In their case, they identified the ebb and flow of two rationalities in an organizational context. In ours we documented three such rationalities present in all three cases.

First, we identified distinct differences between an economic and a technical rationality. Often these two are lumped together, but they are fundamentally different in character [7]. In Max Weber’s [42] original formulation, economic rationality is associated with production efficiency, whereas technical rationality involves bureaucratization, standards, and control. Although recent work in organizational research conflates the two [7], our study again distinguishes between these two forms of rationality. Further, we identify a third rationality that is evident in all three cases – what we refer to as an “innovative” rationality. It is long understood that innovation requires different organizational structures and cultures than efficiency or technically oriented goals [6]. Innovative activity entails uncertainty and
organizations are grounded in different rationalities. Failure and risk-seeking behavior, respectively. These may be more applicable to organizations intolerant of example, self-justification and prospect explanations.

A broad framework that accommodates a variety of escalation processes – such feedback is par for the course in the iterative of “generate-test” cycles that mark innovative activity [35]. As such, what appears to be escalation may be the mark of an innovator – and according to this logic, periodic setbacks are expected, and not an indication of eventual failure at all.

An institutional perspective, thus, recognizes that multiple standards may influence commitment decisions for institutionalized projects, each “rational” according to its specific context. That is, independent of outcome or decision evaluations based on a single, universal standard (e.g., economic rationality), commitment is viewed as a highly rationalized behavior that is “always” appropriate, in situ. Such a view builds upon Bowen’s [3] suggestion that escalation behavior is not irrational, but, rather, rational based on incomplete or ambiguous information. However, we also submit that scholars, themselves – and not just the decision makers they have studied – have largely been constrained, here by an over-reliance on a singular, universal, efficiency-based, economic rationality for viewing commitment that obscures the role of context.

That there is no absolute, “correct” reasoning behind commitment decisions does not, however, suggest the absence of a means to assess decision rationality. As Townley notes:

“Something being context dependent does not collapse into an ‘anything goes’ relativism whereby there are no standards for assessing the reasonableness of a position...Denial of a single objective truth does not deny the multiplicity of truths that guide the particular and the contingent” [40, p.93].

As such, an institutional perspective of escalation is not incompatible with existing theories of escalation. Rather, an institutional perspective can be a broad framework that accommodates a variety of commitment influences found it existing research. For example, self-justification and prospect explanations may be more applicable to organizations intolerant of failure and risk-seeking behavior, respectively. These organizations are grounded in different rationalities.

6. Conclusion

In the introduction of this paper we noted the problem of identifying “good” versus “bad” escalation of commitment at the time of the project, without the benefit of hindsight to inform us as to its eventual success or failure. In this research we begin to answer this question by identifying three rationalities that guide IT project decision making, whereby what may be considered “rational” in a given rationality may not be rational under another. Thus it is important to be clear about the standard for IS project success. Does the goal involve bold innovation? If so, an efficiency-oriented rationality may not apply. Further, we observe that these rationalities ebb and flow in their salience over the life of a project. A project can become institutionalized over time, and this institutionalization reinforces, and is reinforced by, organizational behavior – such as the legitimizing power of annual budget allocations. Given this, we interpret the continued commitment to IT projects in the face of performance setbacks as an inherent byproduct of the IT project institutional environment which motivates persistent commitment behavior.

On the other hand, institutionalized environments are also largely resistant to non-reinforcing stimuli [10], including performance setbacks, equivocal measures of benefits, and environmental uncertainty. Similar to the manner in which broader institutional environments (e.g., industry) impact organizations [22], we suggest that institutionalized projects generally encourage on-going commitment among individual actors by reducing perceptions about project complexity, and thus maintaining the stability of organizational environments. In such contexts, support from other actors within the network is guaranteed not by performance (or non-performance), but by widespread agreement about the legitimacy-based value of project continuation. When projects are viewed as such, it should not be surprising that diminished project performance indicators, even at significant levels, may be subsumed by the pervasive, inertial commitment to legitimized IT projects.

7. References


