

Escalating? Who? Me?

Urban Nuldén

Department of Informatics, Göteborg University, Sweden, nulden@adb.gu.se

Abstract

Information technology projects have been failing and continue to do so. This has been true for the past 20 years. There are no indications that the situation is getting better. However, the escalation literature provides us with a promising theoretical framework for explaining a specific kind of project failure, namely, those projects that seem to take on a life of their own, wasting scarce resources and in many cases never reaching the objectives they were set to fulfill.

Nuldén, U. (1996). Escalating? Who? Me? Information Systems Research Seminar in Scandinavia, Lökeberg, Sweden, p.925-934

Escalating? Who? Me?

Urban Nuldén

Department of Informatics, Göteborg University, Sweden, nulden@adb.gu.se

Abstract

Information technology projects have been failing and continue to do so. This has been true for the past 20 years. There are no indications that the situation is getting better. However, the escalation literature provides us with a promising theoretical framework for explaining a specific kind of project failure, namely, those projects that seem to take on a life of their own, wasting scarce resources and in many cases never reaching the objectives they were set to fulfill.

1. Introduction

Traditional wisdom tells us that project failure depends on poor project management. Surely all of us can agree on that. But what is poor project management? This phrase has become a dumping ground for a plethora of different possible explanations for failing information technology (IT) projects. These failures range from a chronic tendency to underestimate cost and scope of a project, to unsuccessful evaluation and management of the risk associated with IT projects (Keil 1995b).

While there are many types of failing, some IT projects seem to take on a life of their own, “they become like Moses, condemned to wander till the end of their days without seeing the promised land.” Keil (1995a) uses “runaways” to describe these IT projects that continue to absorb valuable resources without ever reaching their objectives. Most of these projects are eventually terminated. There is, however, a tendency to let a “runaway” carry on way to long before appropriate action is taken. Organizations that continue to put resources in a runaway project err since additional money do not give the business effects the “runaway” was intended to accomplish, the organization is wasting valuable resources, and the resources wasted here could be better invested somewhere else (Keil 1995a; Keil 1995b).

We still do not fully understand why some projects are successful but a very large number of them are not. Research shows that many projects fail because of technology or design reasons, but most failures are management and personnel related. However, these failures should be within the control of the project manager.

The abandonment of a project can be viewed as a positive outcome for the organization. It provides the organization with a chance to learn from past mistakes in development projects and thus minimize the risk of making similar mistakes in the future (Ewusi-Mensah and Prazasnyski 1994). However, abandonment of projects as way of learning is a rather radical approach. Instead, identification and intervention in escalation situations present unique opportunities to rethink and reshape IT investments, and reach a more successful IT operation.

This paper discusses escalation of commitment as a possible explanation for project failures. A small case study is used to illustrate escalation in a systems development project context.

2. When is a Project Failing?

Consider the following scenario¹. In 1988 a consulting firm was to develop a new information system for a consortium comprised of Hilton Hotels, Marriott, and Budget Rent-A-Car. The system, CONFIRM, was supposed to be a leading-edge comprehensive travel industry reservation system. Three and a half years after the project had begun and a total of \$125 million had been invested, the project was canceled. A senior IS manager wrote:

“Some people who have been part of CONFIRM management did not disclose the true status of the project in a timely manner. This has created more difficult problems—of both business ethics and finance—than would have existed if those people had come forward with accurate information. Honesty is an imperative in our business—it is an ethical and technical imperative.”

The point made here is very important. The clients and top management were misled into continuing to invest in an operation plagued with problems in database, decision support, and integration technologies. People in the project did know this long before the project was canceled. Why did no one come forward with this information? Two concepts are interesting in discussing this problem. Whistle blowing² and escalation of commitment.

¹ Oz, E. (1994). “When Professional Standards are Lax - The CONFIRM Failure and its Loss.” *Communications of the ACM* 37 (10): 29-36.

² Whistle blowing - "the disclosure by organization members (former or current) of illegal, immoral, or illegitimate practices under the control of their employers, to persons or organizations that may be able to affect action" (Near and Miceli 1995).

3. Commitment to a Project

Commitment has been studied from so many different theoretical perspectives that the term should be abandoned in favor of a set of concepts (Angle and Perry 1981). However, commitment, as used in this paper, is itself not necessarily good or bad, but the level of commitment of various individuals in a project is believed to greatly influence the eventual success of the project since commitment is the state of mind that holds individuals in a line of behavior (Salancik 1977), or the binding of an individual to behavioral acts (Kiesler 1971). Moreover, commitment can also be described as an active counterforce to change (Staw 1982).

For the purpose of managing commitment in organizations it is important to emphasize that when commitment induces a person to complete a difficult or unpleasant task that benefits him and others, then commitment is a good thing. Obviously, without commitment the hard work required will not be done. When, however, commitment leads to a fixation on a policy or behavior of diminishing benefit and rising cost, the situation is obviously less clear. We have overcommitment, or in other words, we have an escalation situation.

4. Escalation situations

Past research has found that decision makers can become overcommitted to previous decisions, and actually invest more resources in a failing project (Fox and Staw 1979). This is an escalation situation and it occurs when decision makers have continued commitment to a specific course of action despite information suggesting that the course of action is failing (Staw 1981; Staw and Ross 1987a). Brockner (1992) elaborates this definition further by arguing that an escalation situation is continued commitment in the face of negative information about prior resource allocations coupled with “uncertainty surrounding the likelihood of goal attainment.”

Decision makers become locked into an escalation situation through what Staw (1981; 1982) calls a “syndrome of decision errors.” This is criticized by Bowen (1987) who argues that commitment to a further investment occurs because of the equivocality in the situation and not because of an over-commitment to a failed decision. Bowen continues, that one “technically” cannot err in an ill-structured decision situation.

There is controversy concerning the explanation of escalation. Brockner (1992) argues that many, but not all, of the explanations fall into two broad categories complementary with aspects of human nature. These are expectancy

theory—additional resources will lead to goal attainment—and self justification—people do not like that their past decisions were incorrect. Staw and Ross (1987a; 1987b) propose an escalation framework which gives us a promising theoretical base for studying and to some extent explaining what poor project management can be. All escalation situations have three common factors that can be isolated (Staw and Ross 1987a): (1) all situations entail some loss or costs—not necessary monetary—that have resulted from an original course of action, (2) the predicaments involve some continuity over time—they are not one-shot affairs, but dilemmas involving ongoing courses of action, and (3) they comprise situations where a simple withdrawal is not an obvious solution. Moreover, the decision maker must have a real choice in deciding whether to persist or withdraw (Brockner 1992), and there must be unambiguous feedback from previous decisions made (Bowen 1987).

Simultaneous with the research on escalation, conducted primarily by organizational behavior researchers, social psychologists did study the same phenomenon using the term entrapment (Schneider 1993). Entrapment situations are those in which decision makers continue to invest their resources in a costly or losing course of action in order to justify the appropriateness of already sunken costs. Although entrapment refers to a decision making process, it is often the outcome of that process that is particularly noteworthy. That is, in the process of justifying already committed resources, the individual can be drawn into an extremely costly or even irrational course of action (Nathanson, Brockner et al. 1982). In contrast to escalation research, subjects in entrapment situations typically incur small continuous losses as they seek or wait to achieve a goal (Bowen 1987).

In order to avoid losing the essence of escalation as a phenomenon, attention should be shifted away from identifying the increasing number of isolated antecedents of escalation situations and toward examining the influence of more general classes of determinants in a range of situations. Staw and Ross (1987a) have proposed a model for studying and understanding escalation situations. They suggest four classes of determinants of escalation situations; project determinants; psychological determinants; social determinants; and organizational determinants.

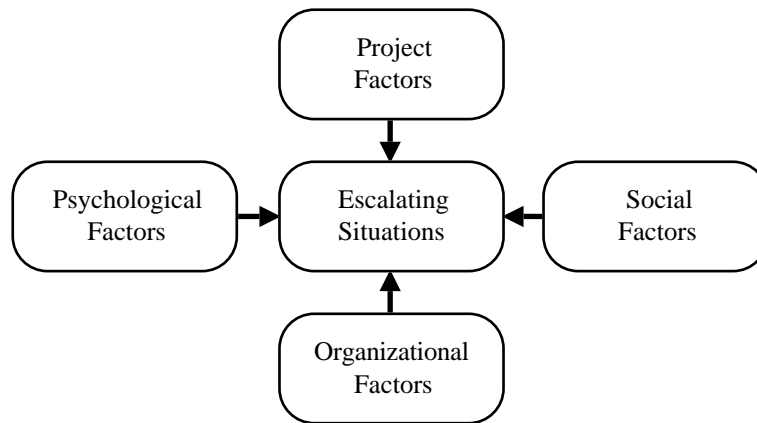


Figure: 1

Project determinants are the objective attribute of a project, the projects' benefits and costs (Brockner 1992). A project is likely to be continued and with high commitment if it is perceived as a long-term investment, expected to have a large payoff, and a long-term payoff structure (Sabherwal, Sein et al. 1994). High commitment is also likely when closing costs are high and salvage value is low (Staw and Ross 1987b).

Psychological determinants cause individuals to see situations from a promising and optimistic view (Brockner 1992). Psychological determinants explain managers' unwillingness to admit that an earlier decision was wrong (Staw and Ross 1987). Self justification theory—when an individual desire to demonstrate rationality to himself—and prospect theory—individuals exhibit risk averting or risk seeking behavior depending on how a problem or decision situation is framed—are useful theories to explain the psychological determinants of escalating commitment (Keil, Mixon et al. 1995). Another psychological factor is the human irrational economic behavior to “throw good money after bad in an attempt to turn around a failing situation, the so called “sunk cost” effect” (Arkes and Blumer 1985; Garland 1990). It is also the case that the more public a decision is made, the less likely it is for the decision maker to change his original decision.

Social determinants, in contrast to psychological determinants that originate from the individual decision maker, originate from the group where the individual is a member. Social determinants hold the individual to a course of action regardless of the individuals own beliefs. Examples are face saving and external justification (Staw and Ross 1987a). Social comparison theory posits that people are concerned with evaluating the appropriateness of their attitudes and behavior. Decision makers are likely to regard the behavior of others as a model for their own behavior. This evaluative process is most apt to occur

when decision makers are uncertain about the appropriateness of their own attitudes or behavior (Brockner, Nathanson et al. 1984). Social determinants also involve a group's relation to another group. A successful effort by a group may influence other groups to attempt the same approach, e.g., benchmarking. This might lead another group to be more optimistic in viewing the problems encountered. Moreover, the behavior of project members are vitally affected by their relative power position (Hall 1991).

Finally, *organizational determinants*, the structural and political environment of a project, e.g., top management support, administrative inertia, and interorganizational interaction. According to Keil (1995b) projects are more prone to escalate when there is a strong political support and when projects become institutionalized. Institutionalization occurs when a project is tied integrally to the values and purposes of the organization, and when actions are taken for granted because they are so deeply imbedded in the subculture or norms of the organization. Long-standing programs and lines of business are not even considered for discontinuation because they are so identified with the organization. Organizational determinants suggest that decisions are a group activity rather than an individual task (Whyte 1991).

5. The ADMIN Project

The short case described in this section serves as an example of a project that exhibits characteristics consistent with the escalation framework presented in the previous section of this paper. Investigation of troublesome or failing development projects presents special problems due to the sensitive nature of the subject matter. The tendency is to forget or put the failure behind you as fast as possible and move on to the next project. Moreover, there seems to be a code of silence in the systems development community which prohibits discussions about failures (Ewusi-Mensah and Prazasnyski 1994). The author is grateful to the project manager for sharing his experience with the project. It should be stressed that facts are omitted to keep the description of the project brief. The project is still ongoing and no complete evaluation or revision is yet done.

In 1994 a subdivision of a mid-size company began developing a computer based system called ADMIN. The system was aimed at improving a relatively simple but very important administrative task. The system is meant to be used to administrate specific properties that a small number of individuals possess. The success of the subdivision, and in the long run the whole organization, is

to some extent dependent on this administrative task and that it operates smoothly.

Before the actual project started, during winter and spring the same year, a system developer from the central systems support department got the request from a manager at the subdivision; could he put together a small computer application that would support the actual administrative task. The developer agreed and started a “quick-n-dirty” attempt, but soon realized that this computer system would be a central part of the subdivision and suggested a more formal and structured approach for ADMIN. The project started in May 1994. The initial project group consisted of three people. Two people from the department carrying out the task, hereafter referred to as users, and a systems analyst from the local systems support. Officially one of the users was project manager, but in reality the systems analyst managed the project. This was his first shot as project manager. The users had no prior experience of working in a systems development project.

The analysis phase of the project was completed in June, followed by the systems requirements and specification phase which was completed in February 1995. The phases encountered no major problems and a client/server solution was suggested since ADMIN was to be used by nine persons at two different sites. An external consultancy firm, hereafter referred to as the firm, were engaged to perform design and implementation. This firm had been involved in successful projects as well as less successful projects earlier. When discussing the technical side of the project one important demand was raised. The tools to be used in the development were chosen by the central systems department. The department had experience of ‘Access’ and ‘Visual Basic’ and found these appropriate for ADMIN. Later this showed to be a bad decision.

The development phase was officially managed by the systems analyst and originally scheduled to be completed in September 1995. This date was later moved to November due to programming problems. “This happens,” and the project group, now expanded with one more programmer from the firm, did not take any immediate actions. The schedule for implementation was once again changed in mid October. The new date were set to February 1996. This made the users and the analyst worried. Senior management at the firm was contacted and an other programmer from the firm was added to the group in the middle of November.

The system was subjected to a first test, performed by the project group, in the beginning of December. ADMIN was very unstable and omitted the test group to get a sense for how the system behaved in a simulated work situation.

The programmer ensured that this would be no problem to fix. Two weeks later a new test were scheduled. This time the system behaved the same way as it did in the last test. Further test were canceled and the analyst contacted senior management of the consultancy firm. They admitted that the first programmer lacked experience with the used tool. The meeting resulted in a new contract: ADMIN will be ready and implemented in late February 1996.

A third test is performed late January. The two day test is canceled after two hours. The consultancy firm puts in two more programmers to speed up the work. A fourth test is performed a week later, and like the previous tests, it fails. The analyst and the users conduct a smaller revision of the system. The structure of ADMIN is not good, but the programmers assures that it will be improved. The project manager does not feel very comfortable with this situation. Two weeks later he decides to call in a very experienced “in-house” programmer to do a more extensive revision of ADMIN. The program code is a disaster. Moreover, the expert concludes that ‘Access’ will not work properly in the planned client/server solution. This as well as other circumstances shows that the firm does not have the situation under control. The project manager decides to halt the project. He and senior management decide to “restart” the project, with new and more experienced programmers. The old system should be used as a specification for the new system and Access is to be replaced. Implementation of ADMIN is scheduled to the last week of May 1996.

6. Discussion

Evolutionary systems design, feedback cycles, software development as a learning and communication process, etc., can be solutions to the ADMIN type of project. But the point made in this paper is that people and organizations can become over-committed to a failing course of action, called escalation situations. These situations occur when organizational projects have little salvage value, when decision makers want to justify their own past behavior, when people in a project are bound to each other, and when organizational inertia and internal politics combine to prevent a project from being shut down, etc.

Can the case presented here be recognized as an escalation situation? The author believe it is too premature to denote the case project as trapped in an escalation situation. However, the case presented in this paper exhibits characteristics consistent with the proposed escalation framework. Examples that signal escalation are:

- ADMIN was the system analyst's first project as a manager. There is reason to believe that the project manager had the need to justify his behavior, partly to himself, but also justify his decisions externally.
- The manager believed that a restart of the project would be costly. A restart imply that earlier invested resources would be wasted and the manager would have to deal with explicit sunk costs.
- The project manager had a positive view, that the problems would solve with time. Admitting an decisional error becomes harder as time passes.
- The first programmer was not properly trained on the tool to be used. Maybe he knew this, but thought that he would learn while he was using it? (*The researcher has not talked to the programmer.*)

Retrospectively, the project manager admits that there were early warning signals that the project might be in trouble. From the very start of the third phase of the project there was some confusion of languages, as the [first] programmer and the other project members had problems communicating. A number of misunderstandings occurred because of this. The project manager did not see this as a major problem at first but realized later that he should have acted on this earlier. But at that time he believed that the communication between him and the programmer should improve. It did not. When the second programmer joined the project in mid November it was obvious that the communication and cooperation between the two programmers were without doubt deficient.

6.1 Avoiding escalation

Research suggests that escalation traps can be avoided through several steps. These fall mainly in two areas, individual action, i.e., what project managers can do and organizational actions, i.e., what top management can do (Keil 1995a; Keil 1995b). This research, on the other hand, suggests three levels, individual, group, and organizational.

First, project managers must recognize that there is a natural tendency to escalate when one becomes too committed to a course of action. If project managers are aware of other projects trapped in escalation situations and the forces "driving" to persist in a course of action and "restraining" withdrawal in the situation, their propensity to escalate in the next project is probably lower than it was in the previous project. Project managers must be committed to the overall objective of the project, but at the same time open to dismiss particular solutions to the problems encountered. Second, on the group level, the project

manager should assure that as many decisions as possible are subject for dissent, e.g., no decision should be made without explicit consideration of the disadvantages or risks involved in the decision alternative. If possible, postpone any decision where no disadvantage is put forward. Third, organizations should, to a greater extent, use formal methods to monitor the progress of projects. Serious project audits must be executed on a regular basis. Organizations must also be tolerant to failures since failure is a prerequisite for innovation. With an explicit company policy on failure people in the organization have guidelines on how to act in escalation situation. I should, however, be stressed that formal methods to monitor the progress in projects will not be a solution to avoid escalation. There are no single applicable solution to the problem of escalation in IT projects.

This paper provides no hard data from which to draw conclusions about reasons for project failures. That was not the intention. Research on escalation is fairly new within our community. The aim here is to contribute to the growing number of cases exhibiting characteristics consistent with the escalation framework. Our understanding of project failure will benefit from a greater range of detailed case studies (Sauer 1993). As professionals we are expected to learn from our own and our colleagues mistakes. ADMIN can be one anecdote to keep in mind.

7. References

- Angle, H. L. and J. L. Perry (1981). "An Empirical Assessment of Organizational Commitment and Organizational Effectiveness." *Administrative Science Quarterly* **26** : 1-13.
- Arkes, H. R. and C. Blumer (1985). "The Psychology of Sunk Cost." *Organizational Behavior and Human Decision Processes* **35** : 124-140.
- Bowen, M. G. (1987). "The Escalation Phenomenon Reconsidered: Decision Dilemmas or Decision Errors?" *Academy of Management Review* **12** (1): 52-66.
- Brockner, J. (1992). "The Escalation of Commitment to a Falling Course of Action: Toward Theoretical Progress." *Academy of Management Review* **17** (1): 39-61.
- Brockner, J., S. Nathanson, et al. (1984). "The Role of Modeling Processes in the "Knee Deep in the Big Muddy" Phenomenon." *Organizational Behavior and Human Performance* **33** : 77-99.
- Ewusi-Mensah, K. and Z. H. Prazasynski (1994). "Factors contributing to the abandonment of information systems development projects." *Journal of Information Technology* **9** : 185-201.
- Fox, F. V. and B. M. Staw (1979). "The Trapped Administrator: Effects of Job Insecurity and Policy Resistance upon Commitment to a Course of Action." *Administrative Science Quarterly* **24** (September): 449-471.
- Garland, H. (1990). "Throwing Good Money After Bad: The Effect of Sunk Cost on the Decision to Escalate Commitment to an Ongoing Project." *Journal of Applied Psychology* **75** (6): 728-731.
- Hall, R. H. (1991). *Organizations — Structures, Processes, & Outcomes*. Englewood Cliffs, New Jersey, Prentice Hall, Inc.
- Keil, M. (1995a). "Identifying and Preventing Runaway Systems Project." *American Programmer* **8** (3): 16-22.

- Keil, M. (1995b). Pulling the Plug: Software Project Management and the Problem of Project Escalation. Atlanta, GA, Georgia State University: Working Paper
- Keil, M., R. Mixon, et al. (1995). "Understanding Runaway Information Technology Projects: Results from an International Research Program Based on Escalation Theory." *Journal of Management Information Systems* **11** (3): 65-85.
- Kiesler, C. A. (1971). *The Psychology of Commitment: Experiments Linking Behavior to Belief*. New York, Academic Press.
- Nathanson, S., J. Brockner, et al. (1982). "Toward the Reduction of Entrapment." *Journal of Applied Social Psychology* **12** (3): 193-208.
- Near, J. P. and M. P. Miceli (1995). "Effective Whistle-Blowing." *Academy of Management Review* **20** (3): 679-708.
- Sabherwal, R., M. K. Sein, et al. (1994). *Why Organizations Increase Commitment to Failing Information Systems Projects?* Miami, FL, Dept. of Decision Science and Information Systems
- Salancik, G. R. (1977). *Commitment and the Control of Organizational Behavior and Belief*. New Directions in Organizational Behavior. B. M. Staw and G. R. Salancik. Chicago, St. Clair Press: 1-54.
- Sauer, C. (1993). *Why Information Systems Fail: A Case Study Approach*, Alfred Waller.
- Schneider, G. P. (1993). *Escalation Behavior in Information Systems Development: Alternative Motivations, Experience, and the Sunk Cost Effect*. business Administration. Knoxville, Tennessee, The University of Knoxville, Tennessee: Dissertation
- Staw, B. M. (1981). "The Escalation of Commitment To a Course of Action." *Academy of Management Review* **6** (4): 577-587.
- Staw, B. M. (1982). *Counterforces to Change. Change in Organizations*. P. S. G. Associates. San Francisco, CA, Jossey-Bass: 87-121.
- Staw, B. M. and J. Ross (1987a). *Behavior in Escalation Situations: Antecedents, Prototypes, and Solutions*. *Research in Organizational Behavior*. L. L. Cummings and B. M. Staw. Greenwich, Connecticut, JAI PRESS INC. **9**: 39-78.
- Staw, B. M. and J. Ross (1987b). "Knowing when to pull the plug." *Harvard Business Review* **65** (2): 68-74.
- Whyte, G. (1991). "Diffusion of Responsibility: Effects on the Escalation Tendency." *Journal of Applied Psychology* **76** (3): 408-415.