

Chapter 15

Runaway Information Technology Projects: A Punctuated Equilibrium Analysis

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ABSTRACT

This paper presents an in-depth insider's case study of a "runaway" information systems (IS) project in a U.S. State government agency. Because such projects are politically sensitive matters and often obscured from public view, details of how such projects operate are not well understood. This case study adds new details to the body of knowledge surrounding IS project escalation and de-escalation. The authors' resulting project narrative details how this project went out of control for so long, raising important questions for future research in theory development for both IS project escalation and de-escalation. The paper argues that a punctuated equilibrium approach to analyzing "runaway" IS projects are a more fruitful area to explore than are "stage models."

INTRODUCTION

Information Systems (IS) project failure is a costly problem, and it is well known that failing projects can seem to take on a life of their own without adding business value (Zmud, 1980; DeMarco, 1982; Abdel-Hamid & Madnick, 1991; Johnson, 1995). A study of over 8,000 IS projects by Johnson (1995) revealed that only 16 percent were completed on time and within budget. The most

studied projects are those that wasted hundreds of millions of dollars, and attracted lots of press. Examples are the FBI Trilogy project (Knorr, 2005; US GAO, 2006), the California Motor Vehicles Driver Licensing System (Bozman, 1994), and the Denver airport baggage handling system (Montealegre & Keil, 2000). These cases of IS projects going wildly over time and budget are called "runaways" (Glass, 1998; Mann, 2003). The management behavior that underlies runaway

projects resembles what psychologists have called “escalation of commitment to a failing course of action” (Brockner, 1992; Keil, 1995). IS project de-escalation, on the other hand, has been defined as the reverse of this process (Keil & Robey, 1999; Montealegre & Keil, 2000; Royer, 2003; Heng et al., 2003) (see Table 1).

The literature surrounding both project escalation and de-escalation have suggested four general types of determinant factors of project commitment: project, psychological, social, and organizational (For a good review of this see Newman & Sabherwal, 1996). However because only a handful of in-depth case studies have been published in this area (Newman & Sabherwal, 1996; Montealegre & Keil, 2000; Pan et al., 2006a; Pan et al., 2006b), little is known about the interaction effects of these factors. This is a view shared by luminaries in the field of IS project escalation (Staw, 1997; Mahring & Keil, 2008). Because we feel that improved understanding of IS project escalation will increase the chance of discovering effective counter-measures, we decided to examine the case presented here.

The paper is organized as follows. First is a literature review of both IS project escalation and de-escalation -- including perspectives from psychology, information systems, and organizational behavior. Second we present the (unpublished) case of a runaway IS project in a U.S. State agency, we call the Workers Compensation Commission (WCC). This project lasted over eighteen years, and was particularly resistant to attempts to substantially redirect or stop it, despite the presence of many of the de-escalation triggers mentioned

in the IS literature (see Table 1.) Third, our paper discusses the limits of the ability of existing theory to describe the WCC case. The paper concludes with a summary of the resulting important unanswered research questions raised by our analysis. We stop short of offering a new process model for IS project escalation or de-escalation, but argue that the punctuated equilibrium theory (Eldredge & Gould, 1972) of organizational change offers a promising overarching framework for future important research in these areas. Punctuated equilibrium models have their roots in biology (Eldredge & Gould, 1972) but are increasingly being proposed in the organizational sciences (e.g., Tushman & Anderson, 1986; Mokyr, 1990; Gersick, 1991).

LITERATURE REVIEW

The roots of both project escalation and de-escalation research can be traced to psychology and organizational science. The literature suggests four general types of determinant factors of project commitment: *project, psychological, social, and organizational* (Newman & Sabherwal, 1996; Keil & Robey, 1999; Pan et al., 2006).

Project factors are its costs and benefits as perceived by management. Projects are seen prone to escalation when they involve a large potential payoff, when they require a long-term investment before substantial gain, and when setbacks are perceived as temporary surmountable problems (Keil, 1995; Keil, Man, & Rai, 2000).

Table 1. Proposed information system project de-escalation triggers

Recognizing unambiguous negative feedback	Garland and Conlon (1998); Ross and Staw (1993); Montealegre and Keil (2000)
Clarifying the magnitude of the problem	Rubin and Brockner (1975); Brockner (1992)
Separation of duties	Barton et al. (1989)
Redefining the problem	Tversky and Khaneman (1981); Montealegre and Keil (2000)

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