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December, 2015

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Abstract

The concept of project success in Information Systems and Project Management research has been one of the key concepts in the field. However, after years of research, the field agrees only that the concept of success is critical to the field, and there is no agreed upon definition or operationalization. This paper addresses these issues by undertaking a critical review of the literature related to project success in the IS and project management fields finding that each of the dominant perspectives has philosophical and practical inadequacies. It then proposes a new conceptualization of project success based on the Morphogenetic Social Theory of Margaret Archer (1988, 1995). This new conceptualization, the paper argues, alleviates these inadequacies and points toward a more robust research agenda for success.

Keywords:

Project Success, IS Success, Morphogenetic Social Theory, Project Management

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Introduction

What is project success? Despite years of examination of the concept, the literature has not produced a consensus definition of success and the literature remains in conceptual ambiguity (Baccarini, 1999; de Bakker, Boonstra, & Wortmann, 2010; Guy G. Gable, Darshana Sedera, & Taizan Chan, 2008; Ika, 2009; Pinto & Slevin, 1988; Rai, Lang, & Welker, 2002). To illustrate this situation, consider this case study of a business process re-engineering (BPR) project described in Larsen and Myers (1999)[1]: the Alpha NZ case. The project here was one in which business processes were redesigned and a new technology artifact was implemented to support them. Initially, the project was viewed as a great success. Projected savings of $2.1 million annually and a 64% reduction in accounting staff were achieved. However, two months later, after the removal of the members of the original project team from the organization, the accounting staff was left without much expertise in the new system and because the management reporting features had not been completed, a lack of ability to generate management reports. These two issues led to low morale in the group. At this point there was a wide disparity in opinion among the various stakeholders about the project. The key players in the project

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[1] Appendix 1 contains a more detailed description of the project.

team, no longer on site, continued to believe that the project was a success. The integration of the system and the financial savings had already paid back the implementation expenses. However, the users had a different perspective. They felt that the loss of expertise and failure to deliver the required reporting made the project a failure.

The research questions then are: how can we determine if a project is a success or a failure? How should project success be conceptualized? Additionally, is it a binary decision? Or is there some middle ground? The answers to these questions from the literature are unclear. The only things that the literature seems to agree upon is that the concept of success is critical to IS research (Guy G. Gable et al., 2008; Rai et al., 2002; Sabherwal, Teyaraj, & Chowa, 2006) and that there is no agreed upon definition (Ika, 2009; Rai et al., 2002) or ways to measure or assess the concept (Guy G. Gable et al., 2008). Additionally, in studying project success or defining it as a variable, the literature has used different definitions of success, which makes cross study analysis difficult because of the translation required. They also hold that it creates issues for practical applications such as making benchmarking difficult (Bannerman & Thorogood, 2012; Guy G. Gable et al., 2008).

To attempt to move beyond this conceptual ambiguity and practical confusion toward a conceptualization of success at the organizational level, this paper examines the various attempts to conceptualize project success from the IS and project management literature and their explanatory power through the lens of the Alpha NZ case. It finds various weaknesses in the existing conceptualizations, either in philosophical ability to examine situations or to properly classify empirical results as either as successes or failures. After

doing so, it conceptualizes project success based on the critical realist Morphogenetic Social Theory (Archer, 1995) in an attempt to overcome these inadequacies. A research agenda for the new conceptualization is suggested.

Literature Review Methodology

This review follows a philosophical analytical approach to the literature as described in Rowe (2014) and illustrated in Alavi and Leidner (2001)'s review of knowledge management. In it we assess the literature and categorize it according to meta-theoretical position. We then analyze the general approach for each meta-theoretical position and identify issues with that general approach to conceptualizing project success. Each general approach was subjected to an evaluation with the Alpha NZ case (M. Larsen & Myers, 1999) to determine its ability to correctly classify the case. This case is appropriate because the Alpha NZ case is a complex one that contains a change in perception of success without a change in the project at all. It is also particularly well suited as it can serve the role of several cases in one. Since it records the history of a project where it was first recorded as a success and then subsequently a failure, it can used first, as two simple cases where the project is completed and evaluated. Then, it is a more complex case where the project is the status of the project has been changed. The various conceptions of project success will need to account for all of these different features.

Data Collection

The literature for this review was gathered following the guidance of Webster and Watson (2002). For this review, we sought to gather articles in both the project

management and IS literature that focused on project success. We included the project management literature instead of solely the IS literature as the IS literature has not considered this issues as intensely as the project management literature and therefore the project management literature has the more mature consideration of project success.

We selected articles that focused specifically on conceptualizing "project success," "IS success," "success criteria," or "evaluation criteria". We focused on theoretical contributions rather than how the concept was operationalized in empirical research because we believe that empirical contributions are driven largely by theoretical work. We did not include the "success factors" stream of research (Bannerman & Thorogood, 2012) as it used the definitions defined previously and did not seek to contribute to conceptualizing "success"

We implemented Webster and Watson's recommendations by beginning with the lists of articles cited in the review articles by Ika (2009) and Jugdev and Muller (2005). This gave us a good basis in the project management literature. We added additional articles by examining the papers referenced by those papers (thus implementing the "backward" chaining recommended by Webster and Watson). We also performed two separate searches in Google Scholar. One for "Success" in the title, the other for "evaluation" in the title selecting those articles that seemed to deal with conceptualization of success or evaluation criteria. For these searches we looked in the major project management journals: "Project Management Journal", "International Journal of Project Management" and "International Journal of Information Technology Project Management" which are the major journals in the project management field. For the IS field, we searched in the journals provided by both the AIS senior scholars and the Academic Journal Guide

produced by the Association for Business Schools (Cremer, Laing, Galliers, & Kiem, 2015) (See Appendix 2 for the list of journals). These overlapping lists provide a large representative sample of the IS literature. We utilized Google Scholar as it provides a more complete and inclusive coverage of the IS literature than other databases such as Web of Knowledge or Scopus (Harzing, 2008). Additionally, textbooks on project management were consulted for their treatment of project management success (Brewer & Dittman, 2010; Brown & Hyer, 2010; Cleland & Ireland, 2007; Kerzner, 2009; Larson & Gray, 2011; Marchewka, 2009; Schwalbe, 2007).

Classification of Approaches

Once the papers were collected, they were classified into categories representing the meta-theoretical approach taken by the authors. We began with the taxonomy specified in Ika (2009), to classify the articles. Ika (2009) identified three basic approaches to project success, "objectivist", "situational" and "subjectivist" with different approaches and assumptions. The "objectivist" views approach project success as a universal methodology by which projects can be evaluated. The "situational" or "contingent" approaches recognize that "one size does not fit all" and those different characteristics of the project and the environment in which it is found call for different success criteria. Thus given a certain set of project and environment characteristics, project success criteria should be similar. In contrast to those two approaches, the subjectivist approaches view success as extrinsic to the project. Project and environment characteristics are not predictive of the perception of success; rather, it is the result of a political and dialogic process.

For our classification approach, we sought to describe the meta-theoretical assumptions behind the different approaches. They are described in detail below. In our approach we found that the situational approaches, as described by Ika (2009), are actually objective methods in that they consider success to be able to be evaluated by objective measures. The measures are idiosyncratically selected based on the characteristics of the project and the environment in which it operates but they are still objective measures. Since Ika (2009), a new view based on the principles of sociomateriality has been proposed (Cecez-Kecmanovic, Kautz, & Abrashall, 2014). This view eschews any attempt at "representation" of success or failure but rather seeks to focus on the story behind how the situation came to be viewed as a success or failure.

Findings

In this section, we report the findings of the literature review. First we consider some term definitions that will be used throughout the discussion. Then we examine the classifications of the articles in terms of conceptualizing success that we found.

Definitions

Mandatory vs. Operational vs. Strategic Projects

First, we recognize the distinctions that literature makes between different kinds of projects. While this distinction is found only in Larson and Gray (2011), it is yet a useful one. First, projects may be distinguished between *mandatory* projects, those that must be done for regulatory and other reasons; *operational* projects, those that are done to improve existing operations; and *strategic* projects, those that are done to provide a

strategic advantage in the marketplace (Larson & Gray, 2011). This distinction is important, as each of these different kinds of projects will have different success criteria.

Project Management Success vs. Project/Process Success

The literature also distinguishes between types of success. First, it describes project management or process success. This kind of success, as its name implies refers to how well the project has been managed and typically refers to whether the project has come in on time, on budget and with the required features, the so-called iron triangle. The other type of success that the literature refers to is project or product success, did the project accomplish the goals or provide the benefits for the customer or organization that it was intended to provide (Baccarini, 1999; Bannerman & Thorogood, 2012; Collins & Baccarini, 2004; Cooke-Davies, 2002; Han et al., 2012; Ika, 2009).

Both project management success and project success represent attempts to describe whether a project a whole has been successful or not. They are not intended to measure only part of the project or project effects. Jugdev and Miller (2005) describe an evolution in thinking about project success over the last 40 years. "During what they term Period 1, the 1960s-1980s, simple metrics such as time, cost, and specifications [project management success] were used to evaluate project success because they are easy to use and within the realm of the project organization" (p. 23). In Period 2, the 1980s and 1990s, critical success factors were identified but used intuitively and not grouped or consolidated into frameworks. In Period 3, the 1990s and 2000s, a number of frameworks were developed to describe how success was success was stakeholder-dependent and that success "involved the interactions between the internal and recipient organization" (p. 25). Especially following the work of Shenhar and associates (2001; 1997) success was

seen as how the project not only delivered what was expected, but also provided customer satisfaction and affected organization performance and prepared the organization for the future which we can consider as using a "project success" view of project success.

IS Success

This term, drawn from the Delone and McLean IS Success Model (1992, 2003) refers to an interdependent set of six concepts that are held to represent the concept of IS Success with one "Net benefits" being defined as the "dependent variable." While all the concepts are interrelated the ultimate determiner of whether an IS is successful is the net benefits that it provides. Delone and McLean suggested that net benefits are such things as "cost savings", "expanded markets", "reduced search costs" and other things (2003, p. 26).

While IS success is a different concept than project success, it can be used as a measure of project success (see below). When project success is measured as the ultimate impact of an information system on the organization, the "net benefits" of system use reflect on the success of the project as a whole and therefore IS success can be considered as a way of assessing project success.

Success Factors and Success Criteria

We must also distinguish between success factors and success criteria. Success factors are those things that when present move the project toward being successful. Success criteria are the measures or standards by which the project is evaluated in order to determine if it is a success or failure (Cooke-Davies, 2002).

Classification of Papers

The final classification of papers is summarized in table 1. As discussed above, the objectivist forms of classification, those that viewed success as an objective characteric of a project we found in three different forms. There are also subjectivist forms of conceptualization which view success as a subjective evaluation of the project and the new non-representational or socio-material form which views success as an "agential cut". We now review each in turn.