The making and impacts of a classic text in megaproject management: The case of cost overrun research

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Received 29 February 2016; received in revised form 16 June 2016; accepted 12 July 2016

Abstract

This paper presents a case study of the making and impacts of a classic text in the field of megaproject management. It focuses on Bent Flyvbjerg, Mette Skamris Holm and Søren Buhl’s article “Cost Underestimation in Public Works Projects: Error or Lie?”, which was published in the Journal of the American Planning Association in 2002. The paper shows that classic texts can have a significant impact on megaproject planning theory and practice. Within the academy, classic texts are those that are widely cited and come to define the theoretical terrain, types of research questions that are asked and methods used in subsequent research. They also directly contribute to new megaproject planning methods and shape the public discourse on megaproject delivery. The paper concludes by identifying the key ingredients that make a classic text.

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Keywords: Megaproject management; Infrastructure; Cost overruns; Classic texts

1. Introduction

This paper presents a case study of the making and impacts of a classic text in the field of megaproject management. In 2002, Bent Flyvbjerg, Mette Skamris Holm and Søren Buhl published the article “Cost Underestimation in Public Works Projects: Error or Lie?” in the Journal of the American Planning Association. Flyvbjerg and his colleagues’ article, which I will refer to subsequently in abbreviated form as Error or Lie?, became an instant classic in the field of megaproject management. Over the years since being published, the paper has been cited hundreds of times, and spawned an intense research agenda on the subject of cost overruns and project delivery failures. The academic impact of Error or Lie? is illustrated by the fact that many subsequent scholarly articles on cost overruns cite this seminal work as the prevailing theoretical contribution in the field to frame their own research questions and conceptual arguments (see: Love et al., 2014; Liu et al., 2010; Eliasson and Fosgerau, 2013; Lind and Brunes, 2015). And more broadly the paper has received extensive international media coverage, shaken up the public discourse on the patterns and causes of cost overruns, and brought about transformational changes in the ways that megaprojects are planned and delivered in many jurisdictions. Amidst the avalanche of research produced in the field of megaproject management every year, why did Errors or Lie? become a classic text for scholars and practitioners? And what have its enduring impacts been? These are the questions to be explored in this paper.

The answers to these questions are informed by the insights that Thomas Kuhn (2012) developed about the role of classic texts in scholarly disciplines, and the conditions that create them. According to Kuhn, classic texts play an important role in scholarly disciplines because they establish the foundations – the paradigms and exemplars – around which “normal science” is conducted. Paradigms set out the terms of appropriate research questions, prevailing theories, accepted methodologies and applications that constitute ordinary work in a field. Over time, the literatures in normal science become increasingly technical and specialized, with a focus on solving well-defined problems.
Paradigms change, however, not through the long cumulative march of normal science, but rather through intense bursts of revolutionary research that confront old theories with new fundamentals. This groundbreaking extraordinary science typically occurs at moments of crisis where anomalies in the prevailing paradigm can no longer be ignored.

Importantly, for Kuhn (2012), the identification of paradigmatic research is a social process that is highly sensitive to context: it is a product of the persuasiveness of the science itself, and the response of the scientific and lay community at large. Research that trigger paradigm changes often builds upon strands of previous scholarship, and then reconstructs the field using new methodologies or theories to create knowledge that could not have been previously envisioned. And truly paradigm-shifting research results in a ‘change of world views’ amongst scientists and practitioners in the discipline, and possibly even society as a whole depending on the relevance of the innovation. All those embracing the change of paradigm will have a new feeling about how things work, notice new problems, ask different questions, and engage in the field in new ways. To seed such significant social transformation, a common feature of revolutionary paradigmatic research is that it focuses on topics of great societal significance, and is communicated in a form that is accessible to a broad audience (Gans, 2009; Glenn, 2009; Kuhn, 2012).

Based on Kuhn’s insights about paradigmatic research, in an applied academic discipline such as megaproject management, assessing the impacts of a classic text must capture the scholarly, professional and societal impacts of the work. These impacts can be measured in a variety of ways. Academic impact can be measured through the number of citations and the extent to which the scholarship influences future research questions and theories. Professional impact can be measured by the way that a classic text influences how project management policy is formed and practice is conducted. And one (though certainly not the only) measure of how a classic text contributes to popular discourses on a topic is the amount and prominence of media coverage it receives.

This paper will argue that Error or Lie? is a textbook case of the making of a classic text that has initiated a new paradigm in megaproject research and project delivery practice. The rationale for focusing specifically on Error or Lie? as a single case study is that Flyvbjerg, the paper’s lead author, is amongst the most cited scholars on megaproject management. And as of 2016 Error or Lie? is his most cited academic paper on the subject. As another sign of the scholarly significance of the article, it is amongst the five most cited papers published in the eighty year history of the prestigious Journal of the American Planning Association. The research has also directly contributed to shifts in megaproject management practice in a variety of countries, and garnered extensive media coverage worldwide (see Flyvbjerg, 2012). As such, Error or Lie? is being presented as an illustrative case of how a leading project management scholar created his most significant and impactful text in the field.

The paper proceeds in three sections. The first section examines the scholarly antecedents and key academic contributions of the article, demonstrating how it has become a classic text in the field of project management. Section two explores the response to the paper, within the academy and beyond, showing how research that reaches the level of a classic text matters to the scholarly field and practice of project management. Finally, the paper will reflect on the lessons that Error or Lie? provides about the making and impacts of classic texts in the field of megaproject management.

To be certain, this single case study of Error or Lie? is not the only path by which a classic text can be produced in the field of project management. There are undoubtedly a confluence of different contextual factors and strategic approaches that other project management scholars have followed to turn their own research into classic texts. Nevertheless, as Yin (1984) demonstrated, the objective of case study research is not necessarily to be universally generalizable to all future cases, but rather to provide a deep context specific description of a subject matter that can provide insights to inform future courses of action. It is in this spirit that Error or Lie? is presented as one important model for making a classic text.1

2. The making of a classic text

2.1. Antecedents

Bent Flyvbjerg did not discover that large, complex transportation, energy, military, social and information technology megaprojects chronically experience cost overruns. Nor did he and his colleagues pioneer research on the topic. For centuries, there have been cost overruns on high profile megaprojects — from Haussmann’s redevelopment of Paris and the building of the American transcontinental railways in the 19th century, to the construction of the Sidney Opera House and the Eurotunnel in the 20th century. Frequent cost overruns have raised the ire of the political and industry sponsors of megaprojects, and befuddled those responsible for project management and delivery (Hall, 1982). The mass media has further made the issue of cost overruns a topic of general public interest, by reporting accounts of budget bursting megaprojects. Cost overruns are thus a major public policy concern because they burden their public and private sector sponsors with significant unexpected additional costs, put the financial viability of major projects at risk, and can be politically embarrassing for all involved with the project (Flyvbjerg et al., 2003; Siemiatycki, 2009).

For more than four decades, cost overruns on megaprojects of all kinds have been a frequent topic of academic study. Over the years, a burgeoning body of scholarly articles, books, and reports have sought to measure the frequency, magnitude, causes and cures of cost overruns on megaprojects (See: Tihanski, 1976; Merewitz, 1973; Hall, 1982; Gehring and Narula, 1986; Pickrell, 1992; Nijkamp and Ubbels, 1999). Prior to Error or Lie?, the prevailing paradigm in the fields of study most closely associated with the theory and practice of delivering megaprojects — engineering, project management and construction management — was that when cost overruns occur, they are primarily

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1 The approach that Flyvbjerg and his colleague’s followed to create a classic text out of Error or Lie? is broadly applicable beyond megaproject management to a wider range of scientific fields. Indeed, Flyvbjerg has followed a similar recipe to turn his book Making Social Science Matter into a classic text in the philosophy of science.
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