Engineering Project Organization Journal 2024

Walking in the Footsteps of a Giant: The Impact of Dr. Peter W.G. Morris on the Science and Practice of Project Management

Raymond E. Levitt[1]

Abstract

This essay considers and reflects upon the mark that Professor Peter Morris made through has personal advocacy and published works on all that is now understood as being project management. Taking a semi-chronological approach, the essay notes the variety of Peter Morris's carefully considered and critically positioned contributions that have had a global and lasting impact. As one of the earliest scholars to seriously consider project management from a scholarly perspective, Peter Morris then went on to both develop his deep knowledge of the field, leading to both his proposition of the 'Management of Projects' and his various provocations that culminated in his concern for project management's role in handling the many and serious challenges posed by climate change and global warming.

Keywords

Professor Peter Morris, major project case studies, front end, global warming.

[1] Operating Partner, Blackhorn Ventures, ray@blackhornvc.com

INTRODUCTION

Few scholars or practitioners of project management have had as profound an impact on both the science and practice of managing major projects and programs as Professor Peter Morris has made during his exceptional career of research, practice and advocacy, all at the highest levels of the academy and in the real world of major programs and projects. My contribution to this Special Issue of a journal linked to the scholarly Engineering Project Organization Society (EPOS) of which Peter was a great supporter and advocate is a very personal tribute. It will detail how Peter's insights, grounded in his real-world experience on major projects and programs across multiple continents, and the precious opportunities I subsequently had to interact with him, massively impacted my own work and the work of my colleagues in our field. I will begin with my earliest exposure to Peter's work and continue from there.

PETER MORRIS' PHD DISSERTATION

Before Peter's 1972 PhD thesis (Morris 1972) and the work of his colleagues at UMIST, the literature on construction project management and the broader project management literature had been dominated by a narrow focus on operational research (OR) techniques such as the Critical Path Method and statistical decision analysis techniques. In conducting research for my own PhD dissertation in 1974, I came across Peter's 1972 PhD thesis. I had contemporaneously been taking classes from Professors William Ouchi, James G. March and other social science theorists at Stanford who introduced me to James D. Thompson's (1967) formulation of different types of interdependence and the appropriate coordination approaches to manage each type of interdependence. These ideas, included in Peter's groundbreaking PhD thesis, greatly enriched the prevailing focus of our field at the time on tradeoffs within the 'iron triangle' of scope, schedule and resources – a term credited to Martin Barnes in 1969 (Newton, 2013), or mathematical models of sequence logic, lags and floats in task networks.

Peter Morris' thesis made rigorous use of Thompson's framework of distinct interdependence types to derive insights about the design-construction interface in building projects, grounded in a series of thoroughly researched case studies. This allowed him to call out how the sequencing of participants' entry into projects, and the projects' size, complexity and uncertainty should best be integrated into the design of the project's organization. It inspired me to engage more deeply with organization theory during my graduate studies on construction safety and made my research both more interesting and more delightful.

Following my PhD, I decided that applying and extending ideas from organization theory in the social sciences to enrich our understanding of how to manage programs and projects more effectively would be the focus for my academic career. This led me to engage in rich collaborations later in my career with social scientists like W. Richard Scott and Douglas McAdam in Sociology, Nobel Laurate Douglass North in Institutional Economics, Hazel Marcus in Psychology and others. In this two-way exchange of challenges and ideas, they

shared their descriptive theoretical insights with us in great depth; and we exposed them to ways in which their theories could be applied to enhance the performance of real-world projects.

Moreover, Peter encouraged me to Invite these social scientists to attend conferences of the Engineering Project Organization Society, so these scholars could interact face to face with project management researchers to learn about the unique administrative and coordination challenges of temporary project organizations, and to share their ideas derived from the study of more permanent, longer-lived organizations with our colleagues. These interactions, in which Peter was an active participant, brought forth new insights about how to foster innovation in project networks as distinct from fostering innovation inside large, monolithic organizations.

THE USE OF DEEP INSIGHTFUL CASE STUDIES

Project-based organizations have been described as being inherently "learning-disabled," (Javernick-Will & Levitt, 2010) because project teams disband sequentially as projects move through their planning, design, construction, commissioning and operations phases, so that all the tacit learnings gained by project participants tend to diffuse and be lost. Tens of millions of dollars have been spent on attempts to "bottle" the knowledge of experienced human experts of project management and other professions in archives, both hard-copy and digital, all with minimal success. As Peter and others have pointed out, the bottled knowledge inevitably fails to capture the richness of the contextual variables that may have influenced the relative degree of success or failure described in the lessons learned, so that future managers seldom ventured into these archives of bottled knowledge to 'drink their wine'.

When major projects are highly successful—which happens too infrequently—project managers and others tend to attribute the project's success to the management and leadership skills and the tenacity of their lower-level managers. However, much of the most valuable potential for learning happens when projects fail to attain their objectives for whatever reasons. This prompts their managers and others to think deeply about how the failures occurred and how they might have been prevented. Sadly, for personal, organizational and legal liability reasons, most project managers have been reluctant or unable to discuss this publicly in a way that others could learn from their failures.

As described above, Peter had launched his academic career with a series of in-depth project case studies and he began to tackle this knowledge diffusion problem head-on!

THE MIT-ADL LECTURE SERIES ON MEGAPROJECT LEADERSHIP

Peter and his family, including his wife Carolyn and then 2-year-old son, Simon, moved to the Boston Area in the late 1970s, following Peter's stint on the program management team that oversaw the implementation of a new telecommunication system for Cairo, Egypt. From the Arlington, Massachusetts office of the Arthur D. Little

(ADL) consulting company, where he was working, Peter connected with me as I was launching my academic career as a young faculty member in the Civil Engineering Department of MIT. He proposed that we set up a lecture series jointly between ADL and MIT that would invite managers of some of the world's most significant megaprojects of the time to discuss their experiences launching and running these megaprojects.

Having never worked on projects of anywhere near the scale of the Trans-Alaska Oil Pipeline System or NASA's Apollo Program, I found these personal accounts of the financial, organizational and coordination challenges of megaprojects across industry sectors to be riveting. Moreover, these megaproject managers—Frank Moolin, Head of Alyeska's Trans Alaska Pipeline consortium, referred to them as "The Managerial Elite"— were quite willing to share stories about their failures, as well as their successes. The series of about a dozen lectures, attended by MIT students and faculty and practitioners from the Boston region, was spread over a year and was extremely well received by the PMI professional and academic project management community in New England; and it inspired a cohort of MIT students to apply their knowledge and skills on some of society's most impactful projects.

SHARING FAILURES: THE MAJOR PROJECTS ASSOCIATION AT TEMPLETON COLLEGE, OXFORD

A subsequent and more formal attempt to capture lessons learned from project failures was a voluntary consortium called the Major Projects Association (MPA) that Peter joined when it was hosted at Oxford's Templeton College. The MPA consortium invited managers of completed noteworthy projects, including several North Sea oil projects, on some of which Peter had been a consultant, along with major defense, telecommunications, and aerospace projects, all of which had experienced varying levels of success, to share their experiences candidly and freely. I had the good fortune to attend one of these lectures. That event applied "Chatham House Rules" for these presentations— i.e., the content from these very candid presentations of project successes and especially failures, could be discussed outside of the group, but none of what had been presented could be attributed to any of the participants. This was my first exposure to a group of industry speakers under Chatham House Rules and I was amazed to see how open these managers were willing to be about their failures to foresee or react to problems that could have been prevented on these different forms of project. The level of group-learning from the discussions of these shared experiences was truly profound. I have subsequently used Chatham House Rules for multiple professional meetings in which we wanted managers to talk candidly about both their successes and failures, and the results have been uniformly excellent. I owe this lesson entirely to my invitation from Peter to attend the MPA meeting, where I had to commit to the same rules.

A BOOK OF CASE STUDIES

Peter later authored *The Anatomy of Major Projects* (Morris and Hough, 1987) a book of

case studies on major projects drawn from his own experience and as garnered from his work at the MPA. In companion papers in this special issue, both Pinto and Edkins have commented on how valuable such in-depth case studies are as vehicles for learning some of the more subtle insights about what makes the most challenging and major/mega projects more or less successful (Pinto, 2022; Edkins, 2022) .

My research and that of many of our colleagues was heavily influenced by Peter's use of case studies as a research vehicle. Late in my career I collaborated with Professor W. Richard Scott, the leading organizational scholar of Institutional Theory, and Professor Steven Barley, organizational ethnographer supreme, to teach our jointly supervised students how to gather information for ethnographic case studies to begin to formulate concepts and hypotheses for testing in more traditional, larger-N, studies. Once we had collected a small number of such ethnographic case studies, we found that Professor Charles Ragin's Qualitative Comparative Analysis (QCA) research method, which allows for structured qualitative comparisons between modest numbers of 10-20 cases, was a perfect bridge between ethnographies of individual projects and large-N statistical studies.

Rigorously carrying out a small set of Morris-style ethnographic case studies of specific projects turned out to be the perfect vehicle for beginning to develop theories about the management of cross national/cross-cultural global megaprojects, and public private partnership (PPP) infrastructure projects. These two themes respectively formed the intellectual cores of two decade-long studies in Stanford's Global Projects Center (Scott *et al*, 2011), (Levitt *et al*, 2019).

STRATEGIC PROJECT MANAGEMENT: A FOCUS ON THE "FUZZY FRONT END"

Early on in his career, Peter Morris advanced project management thinking beyond what he believed was the current focus of PMI's body of knowledge (PMBOK) on optimizing the tradeoffs around the iron triangle of scope, schedule and resources. He argued that the macro-configuration and boundary conditions of projects became locked in during the messy, "front end" of projects (Williams et al., 2019). This phase, often with the precursor of being 'fuzzy' was where the sponsors, financiers, industrial partners, regulators, non-profits, and others maneuvered for advantage in the attempt to 'shape' an economically viable project that had a legal, regulatory and social license to proceed. Moreover, he argued, this was where the influence and impacts of a more robust project management perspective would be highest. Miller and Olleros (2001) subsequently built on this theme in their view that project shaping could be viewed as a series of real options invested in by the project sponsors, with increasingly higher stakes.

Peter also argued ahead of most practitioners and researchers for project managers to expand their focus from optimizing around initial capital cost to evaluating and optimizing the lifecycle costs vs. benefits of projects. He was a pioneer in focusing attention on factoring in any negative social and environmental effects of major projects as part of their lifecycle evaluation. And, he

argued, doing this effectively would escalate the evaluation of projects from middle management up to the C-Suites of large companies. This theme also presaged Peter's burning, late career concern and advocacy for urging researchers and practitioners of project management to use their passion, knowledge and skills to organize major initiatives for combating global warming.

EXPANDING APPLICABILITY OF PROJECT MANAGEMENT THEORIES AND METHODS

The founders of the Project Management Institute (PMI), which became the first association to formalize the body of knowledge related to the management of projects in the late 1960s, came from, and focused on, major defense/aerospace, pharmaceutical and construction projects. Peter was one of the first scholars to assert that the concepts and theories of project management formed a language and set of tools for executing any large strategic initiative successfully.

Project management until around 2010 had been viewed as a professionalized discipline, practiced, similarly to modern corporate accounting or law, by middle managers, and not a subject relevant to senior executives. The author had an experience in the late 1990s submitting a paper to the *Harvard Business Review*, wherein the HBR editor's response to a paper on optimizing the organization design of major programs responded, "This is a paper on project management. We publish for executives, so this article is not relevant to our audience." Undeterred and inspired by Peter's view of how project management could be used to drive strategic initiatives and organizational change in large companies, the author co-conceived and led an executive education certificate program called the Stanford Advanced Project Management Program, which taught the techniques of portfolio, program and project management to mid-level executives in large companies. This program experienced strong demand, received favorable reviews, and resulted in many of the graduates being promoted to Chief Strategy Officers and similar positions to lead strategic change initiatives in both private and public organizations. The editors at Harvard Business Press had apparently changed their minds about the relevance of project management for their audience of senior executives by 2007, when they published a HBS Press book based on the concepts taught in this program (Morgan, Levitt & Malek, 2007).

The discipline, practice and profession of project management has continued to evolve and mature and now PMI and other PM associations worldwide have moved beyond just focusing on major capital projects and programs as found in a select few industries and sectors toward this broader and more strategic view, where project management theory and methods can be applied.

APPLYING PM METHODS TO COMBAT GLOBAL WARMING

Late in his career, around the time he was phasing out of his faculty position at the Bartlett School of Construction and Project Management at University College London (UCL), Peter became increasingly concerned about the existential threat to human

existence on Earth of climate change driven by anthropomorphic activity. Despite his own health battles, he made a passionate plea to the attendees at a joint conference of the *Engineering Project Organization Society* and the *International Megaprojects Workshop* for the attendees to redirect their attention and refocus their efforts on how what we have learned to date about management of major projects could be used to shape and manage key global initiatives to address climate change. Such was Peter's conviction on this topic that he inspired the author and many young researchers in attendance to refocus our attention on this grandest of grand challenges! His advocacy of the urgency of this mission for our field continued until his final breath.

CONCLUSION

In so many ways, Professor Peter Morris was always one step ahead of the field, pioneering the ideas and the practice of project management, expanding its reach and effectiveness, and inspiring a new generation of researchers and practitioners to raise their game to a new level. Those of us who have been inspired by his vision and his actions have truly been following in the footsteps of a giant. It has been my great privilege to be a friend and colleague of Peter Morris for more than 40 years. He is sorely missed by all of us.

REFERENCES

Edkins, A. (2022) *From the Front End to the Back End – the Importance of Strategic Thinking About the Management of Projects*, Engineering Project Organization Journal, Special Issue #1 '*Appreciating the Contribution of Professor Peter W.G. Morris, Ph.D'*

Javernick-Will, Amy N**.** & Raymond E Levitt (2010). *"Acquiring Local Knowledge for International Projects"* Journal of Construction Engineering & Management, ASCE, **35 (**11): 339-346.

Levitt, R. E., Scott, W. R., & Garvin, M. J. (Eds.). (2019). *Public–Private Partnerships for Infrastructure Development: Finance, Stakeholder Alignment, Governance. Edward Elgar Publishing.*

Miller R and Olleros,X. Project Shaping as a Series of Real Options, *Chapter in Miller, R., & Lessard, D. R. (2001). The Strategic Management of Large Engineering Projects: Shaping institutions, risks, and governance. MIT Press.*

Morris, P. W. G. (1972). *A study of selected building projects in the context of theories of organization. Doctoral dissertation, University of Manchester (then UMIST).*

Morris, P. W. G. & Hough, G. H. 1987. *The anatomy of major projects : a study of the reality of project management*, Chichester: Wiley.

Newton, R. 2013. The New Iron triangle. *British Library: Business and Management* [Online]. Available: https://www.bl.uk/business-and-

management/editorials/new-iron-triangle.

Pinto, J. (2022) *A path less-traveled has become the highway* Engineering Project Organization Journal, Special Issue #1

Williams, T., Vo, H., Samset, K. & Edkins, A. 2019. The front-end of projects: a systematic literature review and structuring. *Production Planning & Control*, 30(14)**,** pp 1137-1169.