1. What is done through the lens of megaproject leaders' life stories

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MEGAPROJECTS ARE ESSENTIAL TO SOCIETIES

It was a very rewarding experience to assemble a book that brings together prominent academics and practitioners from all over the world to collaborate and reflect on an essential but complex subject such as the management of megaprojects. This type of project is here understood as “large-scale, complex investments that typically cost a billion dollars and up, take many years to develop and build, involve multiple public and private stakeholders, are transformational, and impact millions of people” (Pitsis et al., 2018, p. 8). Three of the editors were invited to present their research on megaprojects in a seminar organized in March 2017 by the Project Management Institute in India (PMI India). Curious about the Indian context of megaprojects, all three of us read the biography of India's most famous megaproject manager, Mr Sreedharan (Ashokan, 2015). This fascinating biographical account of his life story and experiences from leading and managing rail and metro megaprojects inspired us to initiate this book about leaders of megaprojects around the globe. Except in a few cases (e.g. Ashokan, 2015; Campbell, 2016; Sankaran, 2018; Kalogeropoulos et al., 2020), little attention has been given to leaders as individuals managing megaprojects.

As we know, megaprojects or major infrastructure projects (as we will use the term interchangeably in this book) are popular with politicians and local government officials as a way of creating attractive and economically viable urban areas (Diaz Orueta and Fainstein, 2008; Clegg et al., 2017). Flyvbjerg (2014, p. 8) attributes to the political sublime that drive megaprojects “the rapture that politicians get to build monuments to themselves and their causes”. These projects contain large elements of technological innovation coupled with high (financial) risks, which are often not adequately accounted for (Clegg et al., 2002; Akintoye et al., 2003; Flyvbjerg et al., 2003). Although Flyvbjerg et al. (2003) conclude that the majority of these megaprojects

overrun on costs, fall behind schedule, and fail to deliver, they remain popular as local governments and private sectors are committed to invest in infrastructure. With the global COVID-19 pandemic that occurred during the writing of this book, governments will rely more than ever on infrastructure investments to foster world economy. Given these developments, there is a need for a better understanding of the leaders of megaprojects as individuals managing the multifaceted aspects and social dimensions of these projects. Therefore, our first wish with this book is that it allows readers to better understand what is done through the lens of life stories of a diverse selection of experienced megaproject leaders to better manage megaprojects' multifaceted aspects.

THE CHALLENGING COMPLEXITY OF MEGAPROJECTS

Although megaprojects are essential, they appear as fleeting constellations of multiple, interrelated subprojects with several stakeholders collaborating in shifting alliances with possible opposing interests and value systems (Van Marrewijk et al., 2008). Infrastructure megaprojects are characterized by different types of complexity. First is their task complexity, which is the level of density of the project activities in a spatial and temporal frame. Second is the technological complexity as one infrastructure has to be constructed. Third is the social complexity of megaprojects, based on the number and diversity of actors they involve, or the cultural diversity that comprises the history, experience, and sense-making processes of the different groups that join their efforts in a megaproject (Brockmann and Girmscheid, 2007). Finally, according to Pitsis et al. (2017), complexity is also generated by competing principles and goals of project partners. These authors state that “a megaproject is not only big, in terms of scope and scale and costs, it is also big in its potential for politics in and around the project” (Pitsis et al., 2017, p. 9). These characteristics challenge leaders of megaprojects.

Managing and governing the complexity of megaprojects requires distinct capabilities and personal attributes for their leaders. Traditional leadership practices, rooted in bureaucratic paradigms, are insufficient for managing complex megaprojects. Uhl-Bien et al. (2007, p. 298) suggest a new paradigm for leadership; “one that frames leadership as a complex interactive dynamic from which adaptive outcomes (e.g., learning, innovation, and adaptability) emerge”. Megaprojects need leaders who are in control and who know how to lead, govern and inspire their team members. Above all, they are able to make decisions and to engage various stakeholders to adhere and participate in decision-making processes. This asks for leaders who are true to oneself and others; in other words, who are authentic. According to George et al. (2007, p. 1), “authentic leaders demonstrate a passion for their purpose, practice their values consistently, and lead with their hearts as well as their heads”.

Sometimes, authentic leaders have to be brutally honest in the making or taking tough decisions (Hyde, 2003); at other times a sense of humour is needed to take away tensions and thus positively impact the relationship (Avolio et al., 1999; Hopton et al., 2013). A great deal of responsibility lies on the shoulders of these leaders (Müller and Turner, 2010).

Do these leaders exist? We believe so, although we do not know much about their daily lives in megaprojects. In much of the literature on megaprojects, we do not learn about their fears, insecurities, behind-the-scenes behaviour, frustrations, personal persuasions and biographical backgrounds. A few exceptions are India's 'Metro Man' Mr Sreedharan (Ashokan, 2015; Sankaran, 2018); Grahame Campbell, a 'clarinet playing engineer' managing major projects in unforeseen places in Australia (Campbell, 2016); and Dutch megaproject manager Leendert Bouter, a "chess grandmaster" of infrastructure projects (Veenswijk et al., 2008). We learned for example that, although keeping his project office secular, Sreedharan got his daily inspiration from reading the Bhagavad Gita early in the morning and stimulated his project employees to selfless actions for the good of everyone, stressing that public servants must adhere to idealistic principles of karma yoga (Ashokan, 2015).

In this book, we challenge the implicit assumptions underlying the dominant view on managers of megaprojects as 'super engineers'. The longstanding technocratic, instrumentalist, and economic approach to megaprojects, aimed at enhancing performance, efficiency, effectiveness, and cost-benefit ratio over time, has proven to be incomplete (Hodgson and Cicmil, 2006). This calls for a more humanistic, inclusive and environmentally sensitive approach. As raised by van Marrewijk (2015, p. 14), megaprojects are "the outcome of social interactions just like any other form of organizing that occurs within a multiple context of socially interdependent networks". Therefore, critical scholars have been suggesting that megaprojects should be understood as "complex social settings characterized by tensions between unpredictability, control and collaborative interaction among diverse participants" (Cicmil et al., 2006, p. 676). We cannot claim that this book addresses all the matters related to the complexity of managing megaprojects. However, our second wish is that the book will bring to readers a more human perspective on leaders of megaprojects to the merit of providing new and different insights for the advancement of knowledge on complexity by analysing their experiences and life stories.

BRINGING DIFFERENT PERSPECTIVES FROM LEADERS' PERSONAL VIEWS

Thus, the book gives us the opportunity to learn from the personal views of leaders in managing successfully their complex infrastructure projects. It is based on the collective and collaborative effort of 18 well-known international

academics in the domain of megaprojects, who interviewed 16 great megaproject leaders in Europe, Asia, Oceania and North America to collect their life stories and experiences. Through a biographical approach derived from social sciences (Gabriel, 2004), personal narratives on the lives and experiences of leaders are documented. These stories allow us to better understand the role of these leaders and thus disseminate knowledge on how to deliver infrastructure megaprojects successfully. This will enable academics to further conduct additional research on megaproject leaders to enrich the field of project studies.

Therefore, the book's objectives are: (1) to investigate the managing of megaprojects from a human perspective; (2) to identify new trends in the managing of megaprojects; and (3) to identify lessons learned from personal views of leaders. The book addresses what can be learned from talented leaders involved in the day-to-day management and governance of megaprojects with a clear concern on how these projects are changing the face of countries. The studied leaders agreed to collaborate and spend their precious time to share their personal life, views and learnings with us. They originate from ten different countries; Australia, Canada, China, Germany, India, the Netherlands, New Zealand, South Korea, Switzerland and the UK. They have led and managed 14 different projects including the building of bridges, railways, motorways, tunnels, public transportation systems, a museum, digitalization of a payment system and a hydrocracker.

The 18 chapters in the book are grouped in three sections. Section I contains Chapter 1, which explains the origins and the outline of the book and sets the scene for the rest of the volume, and Chapter 2, which discusses the methodological foundations of the book including the development of a frame of analysis for the biographical cases presented. In Section II, we have grouped the 14 biographical life stories in different continents and called these: European Experiences, Asian and Oceania Experiences and North American Experiences. We thought that it would be easier to present the wide diversity of national contexts of these chapters by continents. Each chapter starts with a summary by the authors on what to expect. Then, a brief explanation of the megaproject under focus is presented, followed by the biographical life story and the career development of a specific project leader. Then, the different experiences of these talented actors are highlighted, and how they managed their megaprojects. Below we discuss the 14 contributions.

EUROPEAN EXPERIENCES

This section covers stories from Germany, the UK, the Netherlands and Switzerland. Chapter 3 (Yvonne Schoper) explains the success of Annegret Schaber, who closed off a vital German motorway for three months in order to successfully renovate it. She developed and implemented a new process

by using the Person–Job fit theory, the Job Crafting theory and the Voice Behaviour theory. The biography of Annegret Schaber and the analysis of her competences help to understand her behaviour in the motorway project that is regarded as a milestone in public infrastructure construction in Germany.

Chapter 4 (Natalya Sergeeva and Andrew Davies) share a life story told by Mark Thurston, the Chief Executive Officer of High Speed 2 (HS2) Ltd., one of the UK's largest infrastructure megaprojects. From the life story interview with Mark, we learn that personal values and authenticity are important ingredients of establishing a self-identity for a megaproject leader.

'Authentic leader' is a socially constructed identity that can be explored based on individual perceptions of leaders' own selves. Therefore, stories and storytelling, with a sense of humour, are important parts of a leader's identity.

Chapter 5 (Bernard Naughton and Harvey Maylor) describes the megaproject of a transformation of millions of UK citizens to a new Universal Credit system. The leadership challenge for the 'unlikely leader' Neil Couling was enormous, having both social and dynamic complexity, and with a history of many failed project leaders. However, Neil was successful in transforming the project and achieved this over four and a half years. This chapter considers the complexities of the project and the leadership responses to these as Couling seeks to destigmatize the doomed megaproject in order to re-establish its legitimacy.

Chapter 6 (Alfons van Marrewijk) investigates new trends in managing megaprojects in the Netherlands and identifies lessons learned from the personal view of Hans Ruijter, programme director in the Netherlands' largest infrastructure project; the motorway renovation of Schiphol–Amsterdam–Almere. Insights into the personal biography of programme director contributes to the understanding of his efforts to develop a resilient partnership with construction firms through the development of trust-building sessions. His personal learning experiences, developed in diverse complex public projects, run parallel with institutional changes in the Dutch construction sector.

Chapter 7 (Nathalie Drouin and Ralf Müller) examines the traits of two Swiss leaders, Renzo Simoni and Dieter Schwank, who have contributed to the realization of the Gotthard Base Tunnel. We learn from this chapter about a legendary megaproject that epitomizes the spirit of the Swiss but, more specifically, highlights the importance of the need for diverse skills in different project phases and of adopting a governance structure that facilitates decision-making.

OCEANIA AND ASIAN EXPERIENCES

This section covers stories from Australia, New Zealand, South Korea, China and India. Learnings are derived from railway, museum, hydrocracker and two

bridges in China. By reading and analysing the Chinese chapters, we realized that leader Ma Zonghao first participated in managing the Hong Kong–Zhuhai–Macau Bridge (Chapter 12) and then became the leader of a similar project, the Dalian Bay Subsea Tunnel (Chapter 13).

Chapter 8 (Daphne Freeder, Shankar Sankaran and Stewart Clegg) provides an account of Grahame Campbell as a successful highway builder in Australia. The chapter compares Campbell's reason for his success with that of the project sponsor the Honorable Nick Greiner who was the Premier of the state of New South Wales, responsible for the award of the M4 Motorway that connected East and West in Sydney. The project used in this chapter is an example of a toll road project that was successfully managed by an entrepreneurial project team who translated their knowledge of managing large engineering projects in the oil and gas industry to build a highway that served as a forerunner of the Build, Own and Operate partnership strategy in Australia.

Chapter 9 (Daphne Freeder, Shankar Sankaran and Stewart Clegg) describes the career journey of Sean Sweeney, engineer and expert in construction. His chosen project was the seven-year \$300 million development of the Museum of New Zealand. The Museum was conceived as an exemplar of New Zealand's independent nationhood. It was innovative on several fronts, including its status as the first significant building in New Zealand to be constructed as base-isolated, to withstand earthquakes. This project had a considerable influence on Sweeney's broader philosophical approach to project execution and delivery.

Chapter 10 (John Steen) highlights that innovation in megaprojects requires careful negotiation, leadership and a creative vision on managing complexity and emergent problems. This chapter presents the biography of John Parker and his life and career, leading to the delivery of a breakthrough energy project in Australia, the Queensland Clean Fuels Project. In this project an innovative manager who was prepared to think outside the conventions of traditional project management was needed. John Parker was such an 'outsider' with a creative personality, and with a wide range of global project work experience. He successfully led the prestigious Queensland Clean Fuels Project megaproject.

Chapter 11 (Maude Brunet) explores the conception and actualization of the Incheon Bridge project, from the perspective of Soohong Kim, who led the project and currently holds the position of Chief Executive Officer of the Incheon Bridge Company. The study employs an 'ethnographic sensitivity' approach, using an in-depth interview and a detailed document analysis to present the achievement of the project along with the project leader's initial vision. Context elements of globalization, construction of the Incheon International Airport, the Incheon Free Economic Zone, and the 1997 Asian economic crisis all contributed to shaping this highly visible and successful

project, which has won international acclaim. The human agency factors (personal values, teamwork and building of trust with all stakeholders) are predominantly highlighted and developed by this project leader.

Chapter 12 (Qian Shi and Chao Xiao) is about the Hong Kong–Zhuhai–Macao Bridge (HZMB), one of the most representative mega infrastructure projects in China in the 21st century that connects Hong Kong, mainland China, Zhuhai and Macao. It has many significant features, such as large-scale investment, complex structure, and coordination among departments at three locations. The author conducted an in-depth interview with Zhu Yongling, the leader of Main Bridge part of the HZMB project from which many insights were drawn and discussed in the chapter around the topics of Zhu's experiences, the unique attributes of this mega infrastructure project, and interacting mechanisms between them that led to a successful mega infrastructure project, referenced by similar projects in the future.

Chapter 13 (Linzhuo Wang and Fangwei Zhu) explores the structural and human agency factors that contributed to the improved performance in two megaprojects, the Hong Kong–Zhuhai–Macau Bridge and Dalian Bay Subsea Tunnel, implemented by China Communications Construction Company (CCCC) in China. The data for this chapter was collected by interviewing the Vice Project Manager Ma Zonghao. He participated in managing the HZMB and then became leader of a similar project for the Dalian Bay Subsea Tunnel. The structural aspects of attention and human aspects of mindfulness in the two megaprojects are key ideas investigated in Ma's story.

Chapter 14 (Ashwin Mahalingam) describes the leadership traits and practices of Brijesh Dixit, the Managing Director of an urban metro rail project being developed in Nagpur, India. Three key leadership traits that Brijesh Dixit espoused are identified – a focus on multidisciplinary, a tendency to lead from the front and a risk-taking mentality that encouraged innovation. These traits then led to three specific strategies that Mr Dixit employed in practice as a leader to manage the Nagpur Metro project. These were assembling and motivating his team, ensuring inclusivity of and transparency towards stakeholders, and developing trust through meeting commitments. The chapter presents a case study of how Building Information Modelling was brought to the Nagpur Metro project as an example that showcases Brijesh Dixit's leadership traits and practices.

NORTH AMERICAN EXPERIENCES

This last part of Section II focuses on two Canadian transportation infrastructure projects in Western Canada and the construction of hydroelectric dams in Eastern Canada.

Chapter 15 (Nathalie Drouin) examines the personality traits and discusses the views of a top manager, Jean-Marc Arbaud, who was involved in the design and implementation of Canada Line, an urban megaproject in Vancouver. The Canada Line was one of the highest profile infrastructure improvements created in Vancouver in preparation for the 2010 Winter Olympics. This chapter uses the metaphor of vessels to highlight two anchor points for the management of megaprojects: (1) megaprojects are like vessels, in which each team member has a role to play, that must be moved forward and (2) the vessel needs a strong captain with specific characteristics.

Chapter 16 (Nathalie Drouin) focuses on the experience and learning of Réal Laporte, a senior Hydro-Québec executive, who has grown, developed and gained his management skills in several major infrastructure projects that built or refurbished hydroelectric dams. The chapter uses the complexity leadership theory to analyse Mr Laporte's leadership style and highlights three entangled leadership roles (administrative leadership, adaptive leadership, and enabling leadership).

Finally, Section III of the book has two chapters. Chapter 17 analyses the biographical cases with the help of the analytical framework developed in Chapter 2 and discusses the findings. The qualitative research study is based on the philosophical stance of interpretivism and its ontology which "assumes that reality is socially constructed; that is, there is no single, observable reality, rather there are multiple realities, or interpretations of a single event" (Merriam and Tisdell, 2016, p. 9). What is being attempted throughout this book is to capture the observed daily reality of managers leading complex projects. Chapter 18 concludes with the trends and lessons learned from the biographical cases. It concludes on *what did we learn about megaproject leaders?* It ends with our outlook on what is in store in the near future for novel research (Drouin, Müller and Sankaran, 2013) in the field of megaprojects.

We hope that you will enjoy your reading!

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