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BALANCING **PERSON**-CENTRIC AND **TEAM**-CENTRIC **LEADERSHIP** IN PROJECTS

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1. Introduction

We would like to thank the Sponsored Research Program (SRP) of the Project Management Institute (PMI) for sponsoring this research on balancing of person-centric and team-centric leadership in projects. It is only through their generous support for research such as this that we are able to contribute to future developments and directions at PMI. The entire project team thoroughly enjoyed the collaborative and open working relationship in terms of trust, communication, and partnership between the team and the PMI SRP members, and more specifically with Professor Henry Linger, PMI liaison for this research project. Moreover, we are grateful for all the support we received from the participating organizations.

This final report presents the findings that were developed by our international team, led by the principal investigators: Professor Ralf Müller (BI Norwegian Business School), Professor Nathalie Drouin (ESG UQAM and executive director, KHEOPS), and Professor Shankar Sankaran (University of Technology Sydney). Other associate investigators from nine regions of the world also contributed to the study. Hence, we had teams of up to five researchers each in Australia, Canada, China, India, Lithuania, Norway, South Africa, Sweden, and the Netherlands.

Leadership has been explored for years, and leadership studies tend to be based on either the traditional perspective that assumes a person-centered, or vertical leadership, that "stems from an appointed or formal leader of a team," or a team-centered, horizontal leadership perspective that views leadership as "a group process in which leadership is distributed among, and stems from, team members" (Pearce & Sims, 2002, p. 172). Few studies have explored the combination of both leadership approaches in projects (Müller, Vaagaasar, Nikolova, Sankaran, & Drouin, 2015) or the interaction between vertical and shared leadership (Hsu, Li, & Sun, 2017). The present research does this by introducing the concept of balanced leadership to the world of project management research. It describes a form of leadership characterized by dynamic transition of leadership authority between project managers as vertical leaders and team member(s) as temporary horizontal leaders. Consequently, the study extends current research work on leadership by broadening the scope from *person-centric* to *person-and-team-centric* leadership. This new understanding of leadership allows project managers to leverage benefits stemming from having the best possible person leading the project at any point in time during the life of the project.

This final report has sections parts. Each section plays a key role to guide the reader through the journey of understanding and appreciating the work conducted by the researchers. The next section presents the research questions and objectives; Section 3 summarizes the most relevant literature reviewed and describes the conceptual framework developed to carry out this research; Section 4 explains the methods used; Section 5 summarizes the primary results and includes the discussion of the findings; Section 6 presents some practical applications of the findings; and Section 7 explains the conclusions from this research project.

2. Research Questions and Objectives

Recent years have shown a growing diversity of perspectives toward leadership in projects. The traditional *person-centered,* or vertical leadership approaches (e.g., Turner & Müller, 2006) are increasingly being supplemented by team-centered, horizontal, or shared leadership approaches (e.g., Lindgren & Packendorff, 2009). Within this duality of perspectives, related studies in the context of project management tend to polarize toward one side of the spectrum, rather than integrate the two perspectives into a holistic understanding of leadership in projects. In this research, we address this gap by asking three research questions (RQs).

First, we explore the relationship between the two perspectives across different dimensions. So we ask:

RQ1: What is the relationship and balance between person-centered and team-centered leadership in projects of different type, size, and national culture?

The existing literature indicates a variety of situations where either one of these approaches can be more successful, such as person-centered leadership in emergency situations (Goleman, Boyatzis, & McKee, 2002) and team-centered leadership in change management projects (Pearce & Sims, 2002). Little research is reported on their combined impact on organizational or project success, or the particular balance of leadership approaches in successful projects. Therefore, we ask:

RQ2: What is the individual and combined impact of person-centered and team-centered leadership on projects of different type, size, and national culture?

The conditions for balancing person-centered and team-centered leadership in different contexts is also yet unknown. Hence, we ask:

RQ3: What are the context factors that moderate or mediate the individual or combined impact of person-centered and team-centered leadership on project success?

The objectives of the study are to:

- Identify the nature and balance of person-centered and team-centered leadership in projects to allow project managers to consciously apply these approaches in leadership situations;
- Quantify the impact of the two leadership approaches, both individually and combined, on project success, in order to identify the relative importance of leadership for project success; and
- Provide a framework of "suggested practices" of balanced mixes of person-centered and team-centered leadership in defined situations, thus identifying the contextual variables that make project success conducive for particular combinations of the two leadership approaches.

3. Literature Review and Conceptual Framework

The study is embedded in the currently ongoing discussion of whether leadership in projects predominantly stems from the project manager's personality and style, or if it emerges from the interaction of the team members as the project unfolds. This discourse developed through two streams. The first one is person-centric and addresses the project manager as a leader—for example, in PMI-funded studies such as those by Amason et al. (2007), who showed that transformational leadership style correlates positively with project success, despite the findings by Keegan and Den Hartog (2004) that transactional leadership is the preferred style among project managers. Other PMI studies investigated project manager personality and showed that project managers' emotional intelligence influences their leadership style and correlates strongly with project success (Turner & Müller, 2006). Hence, successful project managers show a strong people orientation, in both leadership style and personality.

The other stream assesses the interaction between team members and the leadership arising from this—thus, team-centered leadership. The work by Packendorff and colleagues (e.g., Crevani, Lindgren, & Packendorff, 2010) on project teams, as well as research in general management, shows that in particular circumstances, such as high complexity and nonurgency of a task, team-centered leadership can have a higher contribution to success than leadership by the formally appointed leader (Cox, Pearce, & Perry, 2003).

At the crossroads of these streams lies project reality—that is, both leadership streams are present in projects and alternate over the course of the project life cycle. Hence, we propose that a project's chances for success are maximized when leadership authority dynamically shifts, at any given time, to the person who is best suited to lead through the issue at hand. We call this balanced leadership, as leadership authority balances between the project manager as vertical (formally appointed) leader, and a team member as horizontal leader.

However, leadership by a team member must be enabled and controlled by the project manager (O'Toole, Galbraith, & Lawler, 2003). When the project manager allows for leadership by a team member, a coordinating mechanism, named the socio-cognitive space, emerges in order to synchronize the work between the project manager and team members through a shared understanding of (1) *empowerment*: who is empowered to be a leader (Sharma & Kirkman, 2015), (2) *self-management*: the empowered leader's qualification for the role (Manz, 1986), and (3) sh*ared mental models*: team members' particular skill sets and their availability for the project (Johnson, Lee, Khalil, & Huang, 2007). The specific combination of these three elements allows the team and the project manager to identify who is and who can be the best possible leader at any point in time during the project (Müller, Vaagaasar, Nikolova, Sankaran, & Drouin, 2015).

4. Methods

The study was carried out in four steps. A systematic literature review of vertical and horizontal leadership was undertaken to identify categories of situational contingencies of horizontal and vertical leadership. This set the scene for a sequential qualitative and quantitative mixed-methods study (Cameron & Sankaran, 2013). Prior to the qualitative phase of the study, a pilot test was carried out with three cases each in China and Australia to identify the nature, scope, and situational contingency of the balance between person-centric and team-centric leadership in projects. This test helped develop a case study protocol to ensure data compatibility across cases in the subsequent qualitative phase of the study and to ensure the reliability and validity of the case study approach (Yin, 2009).

The underlying philosophical stance adopted for this research was critical realism in the sense of Bhaskar and colleagues (e.g., Archer, Bhaskar, Collier, Lawson, & Norrie, 1998; Bhaskar, 1975). The three levels underlying critical realism (mechanisms, which give rise to events, which give rise to experiences) are especially suitable for mixed-methods studies because they integrate the objectivity of quantitative studies (i.e., mechanisms and events level) with the subjectivity of qualitative studies (i.e., events and experience level).

Nine teams engaged in the study and performed interviews. After 166 interviews across 33 case studies, a theory framework for balanced leadership was developed using Archer's (1995) realist social theory and its morphogenic cycle. This was followed by individual studies for each of the five elements of this framework: nomination; identification; selection; horizontal leadership and governance; and transition.

The studies were carried out in nine different countries (Australia, Canada, China, India, Lithuania, South Africa, Norway, Sweden, and the Netherlands) with a total of 249 interviews in 54 case studies. It was carried out in multiple sectors and in organizations of varied sizes, from small (<50 employees) to large (>250 employees). The case study design followed Yin's (2009) multiple case design with replication logic.

Subsequent to these qualitative studies, a model was developed to quantitatively investigate the relationships among vertical leadership, horizontal leadership, socio-cognitive space, and project success. A web-based questionnaire was developed to test, validate, and expand on hypotheses that were developed from the prior studies using a partial least squares structural equation modeling (PLS-SEM) approach (Hair, Hult, Ringle, & Sarstedt, 2014). Snowball sampling elicited 174 responses from around the world. The resulting model showed the impact of horizontal leadership on project success, and how this impact is mediated by elements of the socio-cognitive space.

The results of the qualitative and quantitative studies informed the subsequent theory-building process, which followed Alvesson and Kärreman's (2007) mystery contruction technique. This allowed us to answer the three research questions and achieve the aims set for the study.

5. Results and Discussion of Findings

The analysis of the first 166 interviews allowed us to identify the generic patterns of the process between vertical and horizontal leadership (further on referred to as balanced leadership [BLS]). Five events were identified that constitute the contents of BLS, together with an overall macro-process, which is complemented by micro-processes in each of the five events. This allowed the development of a theoretical framework (see Müller et al., 2018a), which guided further, more detailed studies on each of these events. The following description integrates all these studies. The upper part of **Figure 1** shows this framework by outlining the sequence and iterative nature of BLS events, which are nomination, identification, selection, horizontal leadership (HLS) and governance, and transition. The lower part shows the specific tasks executed by the vertical and horizontal leader in each event.

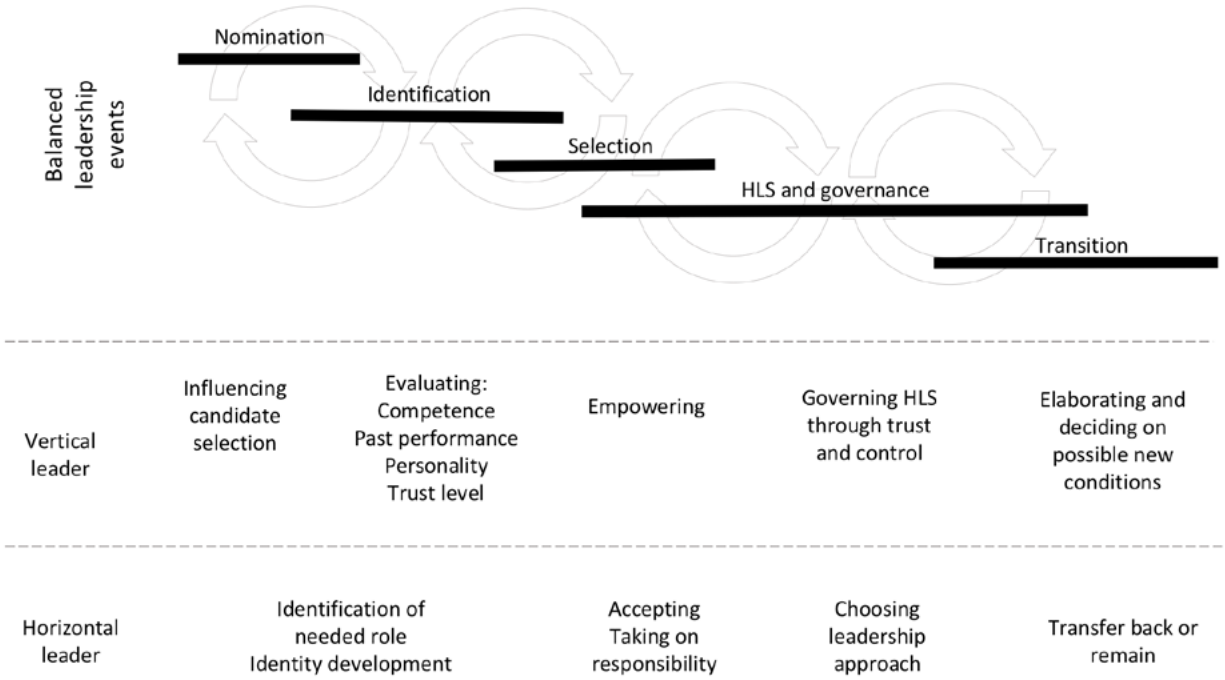

Figure 1: Balanced leadership events and their content

Nomination: The nomination of resources to join the project team is the first event that can occur in the morphogenic cycle. This could happen in multiple ways at different points in time as project members join and leave a project. Depending on the context of the project, project managers may exert their influence on the choice of members to work on a project. In this case, the project manager may be able to identify a horizontal leader early in the project, based on their evaluation of the team member's skills and ability, based on past knowledge of the member. The project manager is thus able to choose members with the potential to be horizontal leaders, which influences the "nomination." (For more details, see Sankaran, Vaagaasar, & Bekker, In press.)

Identification (of possible horizontal leaders)**:** This is the identification of potential horizontal leaders for existing or anticipated situations in the project. The goal is to match situational requirements with project team members' capabilities to carry out leadership tasks when appropriate. This could happen in three different ways: (1) Team members proactively look for opportunities or situations under which they can fulfill the role of a horizontal leader and indicate this to the project manager; (2) project managers identify team members based

on their past performance, personality, and motivation; or (3) project managers establish a relationship and level of trust with each team member as a starting point for identification. Subtle interactions between the project manager and the horizontal leader characterize the event and influence the decision by the project manager to empower a potential horizontal leader (see Müller, Zhu, Sun, Wang, & Yu, 2018).

Selection (of horizontal leaders)**:** Here, the project manager uses empowerment to select one or several team member(s) on a task basis as horizontal leader(s). This takes place through a process of aligning the situation and the candidate's capabilities (which could include reasons such as being a substitute for the project manager or as career development), and scoping the leadership task for the candidate, followed by announcing it to the extent needed (see Yu, Vaagaasar, Müller, Wang, & Zhu, submitted for publication).

Horizontal leadership and its governance: This event starts when the selected team member has accepted the role as horizontal leader and then carries out the role they are designated to lead. The investigation in six case studies showed that vertical leaders retain the right for leadership related to business and political aspects, as well as those decisions that influence the overall scope, time, and cost objectives of the project and the shared understanding thereof. Horizontal leaders are expected to lead in their particular technological domain and the accomplishment of daily tasks, and sometimes to lead specific stakeholder groups, contingent on their particular knowledge of this group (see Drouin, Müller, & Sankaran, In press).

The governance of the horizontal leader by the vertical leader is dependent on context factors, such as the organization's culture, structure, and corporate governance, as well as project-internal factors, such as risks and uncertainties. Moreover, it depends on the vertical leader's perception of the horizontal leader's professionalism, personality, and benevolence. The combination of these factors gives either preference for one of the two popular governance mechanisms (trust or control) or for a situation-dependent balance of both, with the related level of autonomy for the horizontal leader (see Alonderienė, Šimkonis, Pilkienė, Chmieliauskas, & Müller, submitted for publication).

Transition: This is the end of the temporary assignment of the horizontal leader, indicated by either fulfillment of the task or premature termination by the vertical leader. It is the time for reflection and feedback on the task accomplishment by both leaders. In addition, the vertical leader reflects on the appropriateness of the conditions that underlie the identification and selection of the horizontal leader prior to their assignment, and decides whether these conditions should be altered or retained for future repetitions of the cycle. For the horizontal leader, a number of possible outcomes is possible, including a return to the team member role, an extension of the appointment, or the move into a permanent project manager role in another project now or later.

Balanced leadership does not happen automatically. It is contingent on a few enablers. These include that the vertical leader must have a positive attitude toward team members taking a leadership role, and the project management methodology and project culture. The latter is indicated by balanced leadership being preferred in projects using waterfall methods or a mix of traditional and agile approaches (typical for IT and product development projects), whereas large-scale construction projects prefer more vertical leadership, and agile/scrum projects more horizontal leadership approaches (see Drouin, Vaagaasar, Sankaran, & Müller, submitted for publication)

The coordination between team members (including the horizontal leader) and the project manager as vertical leader is regulated through a so-called socio-cognitive space. This is the shared understanding of three key elements of empowerment (who is currently "in charge" as a leader), self-management (how good the person

is in this role), and shared mental models of the team members (which skills are available, through whom, and when). The particular combination of these three elements defines the extent to which horizontal leadership is possible (see Müller et al., 2015).

A quantitative, worldwide study investigated the relative impact that vertical and horizontal leadership and the socio-cognitive space have on project success. The study showed that the three elements of vertical leadership (nomination, identification, selection) explain about 20% of project success. Horizontal leadership alone accounts for about 24%. When combined, they explain about 28% of project success. Hereby, horizontal leadership partially mediates (~53%) the effect of vertical leadership on project success. The cognitive space, in turn, mediates both the vertical leadership to success relationship (~50%) and the horizontal leadership to success relation (~30%). Here, the socio-cognitive element shared mental models mediate both relationships, supported by empowerment for vertical leadership and self-management for horizontal leadership. The two leadership approaches in combination with the socio-cognitive space explain about 42% of project success. Hence, both vertical and horizontal leadership is in direct correlation with success. The joint impact of both is increased through the socio-cognitive space as a coordination mechanism between the two leadership approaches (see Müller, Sankaran, & Drouin, In press).

In summary: When balanced leadership is enabled, a conscious identification process sets in, where team members and project managers engage in identification of suitable skills and situations, which leads to the development and subsequent selection of suitable horizontal leaders when needed. The horizontal leaders lead mainly technical and daily-routine tasks and issues, while the project managers retain leadership authority for business and political tasks. Horizontal leaders are governed by the project manager using trust and control approaches depending on the professionalism, personality, and benevolence of the horizontal leader. When their task is completed, horizontal leaders return to their team role, with an increased chance of becoming project managers themselves in the near future.

6. Practical Application of the Findings

At least five practical applications emerge from the study.

Conscious creation of a socio-cognitive space: Knowing about the socio-cognitive space provides practitioners with the three elements that need to be managed to make balanced leadership work. These are: (1) nonambiguity about who is empowered to lead at any point in time, (2) clarity surrounding the legitimacy of the empowered person (why is the person empowered—for application of skills or for learning new leadership skills?), and (3) understanding the strengths and weaknesses of the team in terms of skills and their availability.

Proactive management through the theory framework: Awareness of practitioners, consultants, and trainers in project management about the cycle and its five events (nomination, identification, selection, horizontal leadership and governance, transition) allows them to prepare possible horizontal leaders purposefully for the benefit of their projects. Examples include the timely identification of needed roles in projects in order for team members to position themselves accordingly and thereby foster their career development, as many horizontal leaders become vertical leaders of other projects thereafter.

Deliberate identification and selection of team members as candidates for horizontal leadership: Successful balanced leadership starts with the nomination of candidates to become project team members. The project manager should purposefully control, or at least have a say in this nomination, in order to identify those candidates who have the best chances of being developed and appointed to horizontal leadership roles, for the benefit of the project.

"Know thyself" for the good of the project and yourself: In today's complex and ever-larger projects, the project manager cannot be the most proficient specialist in all areas, such as technology, business, management, and so on. It is imperative for successful leadership that the project manager knows their strengths and allows horizontal leaders to complement their weaker sides. This maximizes project performance and provides fertile ground for new project managers to develop, without putting project managers at risk.

Awareness of leadership styles, nature of decisions, and scenarios: The study provides insights into how horizontal leaders execute their leadership task in the context of balanced leadership in projects. It reveals that balanced leadership is executed mainly through task-oriented leadership and that the switching of leadership authority is based on trust the vertical leaders have in the horizontal leader and their competences. Vertical leadership is strongly influenced by national and organizational culture. Practitioners in horizontal leadership roles should adjust their leadership approaches to the styles of the project managers governing their leadership task. The study provides evidence that technical, daily-routine, and stakeholder leadership tasks are typically delegated to horizontal leaders, while project scope, business, and strategic leadership remain within the leadership of the project manager.

7. Conclusions

The study showed that balanced leadership exists in projects, and that it manifests itself, contingent upon on a number of factors. The answers to the research questions are as follows:

RQ1: What is the relationship and balance between person-centered and team-centered leadership in projects of different type, size, and national culture?

The deliberate use of a balance of the two leadership approaches is a way to improve efficiency in the management of projects. This is done by appointing the best possible leader at any point in time for the project, independent of the person's formal role as project leader or team member. Team-centered (or horizontal) leadership is enabled by person-centered (or vertical) leadership. This can only happen when the project manager makes it happen. Other contingency factors include project type and size. Large-scale construction projects are dominated by person-centric leadership, whereas agile projects are dominated by team-centered leadership. Balanced leadership is preferred in development projects and/or projects using waterfall or similar methods. Cultural differences were found in the leadership styles of the vertical leaders, when they have delegated tasks to the horizontal leaders. In countries like Canada and Australia, project managers prefer more autocratic and transactional styles, whereas in Scandinavian countries, the democratic and transformational styles dominate.

RQ2: What is the individual and combined impact of person-centered and team-centered leadership on projects of different type, size, and national culture?

Measured independently, person-centered leadership explains about 20% of project success, and team-centered leadership about 24%. In combination, the two leadership approaches explain 28% of success. However, when combined with the socio-cognitive space as coordinating variable, the three variables together explain about 42% of project success. Team-centered leadership reduces the impact of person-centered leadership on success. The socio-cognitive space elements of shared mental models, empowerment, and self-management partly mediate (i.e., control) the relationship between leadership approaches and success. No differences were found by project type, size, and national culture.

RQ3: What are the context factors that moderate or mediate the individual or combined impact of person-centered and team-centered leadership on project success?

Some of them are mentioned above, such as the project manager's attitude toward team-centered leadership; the type, size, and methodology used in projects; and the impact of culture on leadership styles. Moreover, the answer to RQ2 implies that team-centered leadership partly mediates (i.e., controls) the relationship between person-centered leadership and project success, as it reduces the impact of person-centered leadership. However, the impact of both leadership approaches on project success is partly mediated by the socio-cognitive space. This leads to the notion that both leadership approaches can exist solely on their own, but their value is maximized through the socio-cognitive space.

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Appendix B: Biographical Sketch of Investigators

PRINCIPAL INVESTIGATORS:

Ralf Müller, DBA, MBA, PMP, is professor of project management and former associate dean at BI Norwegian Business School, as well as adjunct and visiting professor at many other institutions worldwide. He lectures and researches in leadership, governance, organizational project management, and research methods. These are also the subjects of his more than 200 academic publications. He is editor-in-chief for the *Project Management Journal*. Among the awards he has received are the 2016 PMI Fellow of the Institute Award, the 2015 PMI Research Achievement Award (a lifetime achievement award), the 2012 IPMA Research Award, and the 2009 Project Management Journal Best Paper of the Year Award. Before joining academia, he spent 30 years in the industry consulting with large enterprises and governments in more than 50 different countries for their project management and governance. He also held related line management positions, such as the worldwide director of project management at NCR Corporation.

Shankar Sankaran, PhD, MEng, PMP, is the professor of organizational project management at the University of Technology Sydney (UTS), Australia. Shankar teaches advanced-level courses in a master's of project management program. He is a member of the Built Environment Informatics and Innovation Centre, the Centre for Business and Social Innovation, and the UTS Megaproject team. His current research projects are in project leadership; governance of innovation in portfolios, programs, and projects; and megaprojects. Shankar is on the editorial board of the *International Journal of Project Management*. Shankar volunteers for PMI as a leader of on-site visit teams for the Global Accreditation Centre (GAC). He is a director of PMI GAC since January 2018. Shankar worked as a project team member, project director, and operations manager on major projects in the Asia Pacific Region, holding leadership positions for more than 15 years in industry before joining academia.

Nathalie Drouin, PhD, MBA, LLB, is the executive director of KHEOPS, an international research consortium on the governance of large infrastructure projects, the editor-in-chief of the *International Journal of Managing Projects in Business*, a full professor in the Department of Management and Technology at the School of Management at Université du Québec at Montreal (ESG UQAM), and adjunct professor at the University of Technology, Sydney. She is a former associate dean of research and a former director of the Project Management Master's Programs Graduate Project Management Programs at ESG UQAM. She teaches project initiation in the Graduate Project Management Programs. The result of her work has been published in major academic journals and presented at several international conferences. She is interested in organizational project management, leadership issues, and infrastructures. She is a member of the PMI Academic Member Advisory Group. She is also a member of the board of directors for the Logistics and Transportation Metropolitan Cluster of Montreal, and an Audit Committee Member of Parks Canada Agency.

ASSOCIATE INVESTIGATORS:

Australia:

Natalia Nikolova, PhD, is a senior lecturer in management at the University of Technology Sydney Business School. Her research interests focus on organizational practices, strategy, leadership, and innovation in the context of project-based organizations. She has published in academic journals and books and her work has been presented and recognized at several international conferences. Currently, Natalia is undertaking research projects on leadership in projects, temporary organizations, intrapreneurship, and organizational tensions. She is on the editorial board of the *Journal of Professions and Organization*.

Peter Graham has a bachelor's of business with first-class honors from the University of Technology, Sydney (UTS). He is currently undertaking his doctorate in organization and management studies at UTS. Peter's research interests focus on temporary and project-based organizations. In particular, he is interested how these organizations leverage innovation, leadership archetypes, and roles to develop competitive advantage. Currently, Peter is undertaking transdisciplinary research projects investigating continuity and change in temporary organizations and balanced approaches to project leadership in the construction industry. His research has seen him study projects in a wide range of contexts, from event organizers to military R&D programs.

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