Practices, projects and portfolios: current research trends and new directions

Stewart Clegg[a], Catherine P Killen[b], Christopher Biesenthal[c] and Shankar Sankaran[d]

Citation: Clegg, S.R., Killen, C., Sankaran, S. & Biesenthal, C. (2018), "Practices, projects and portfolios: current research trends and new directions", *International Journal of Project Management*, Volume 36, pp 762 – 772. https://doi.org/10.1016/j.ijproman.2018.03.008

[a] Stewart Clegg
Faculty of Business, University of Technology Sydney
P O Box 123, Broadway NSW 2007, AUSTRALIA
Universidade Nova Faculty of Business and Economics
Lisboa, PORTUGAL
stewart.clegg@uts.edu.au

[b] Catherine P Killen (Corresponding author)
Faculty of Design, Architecture and Building, University of Technology Sydney
P O Box 123, Broadway NSW 2007, AUSTRALIA
Phone +61 9514 1830
catherine.killen@uts.edu.au

[c] Christopher Biesenthal
WHU - Otto Beisheim School of Management, Erkrather Str. 224a
D-40233 Düsseldorf, GERMANY
christopher.biesenthal@whu.edu

[d] Shankar Sankaran
Faculty of Design, Architecture and Building, University of Technology Sydney
P O Box 123, Broadway NSW 2007, AUSTRALIA
shankar.sankaran@uts.edu.au

Practices, projects and portfolios: current research trends and new directions

Abstract

Project portfolio management (PPM) bridges strategy and project management. Traditional research in PPM has primarily investigated the rational, top-down and structural aspects of strategizing. By doing so, it has failed to focus on the underlying practices that are triggered by the strategy and how these practices frame strategy implementation. Practice-based research provides a methodological lens to explore the reality of strategic enactment through the project portfolio. Practice-based perspectives are under-represented in PPM research; therefore the aim of this paper is to provide an agenda for further practice-based research in PPM. Central to this agenda is a concern with various aspects of practice, including its discursivity, representation, dynamic capabilities, leadership and materiality.

Keywords: Practice-based research; Strategy-as-practice; Project portfolio management; Dynamic capability; Emergent strategy.

Practices, projects and portfolios: current research trends and new directions

1.0 Introduction

Traditionally framed by mechanistic and rationally linear assumptions, project management research is evolving to embrace more contextual practice-based perspectives. Focusing on what project managers do in practice addresses the gap between the abstract idealism of prescribed approaches and the practical heuristics of sensemaking as enacted project management, which helps understand how these abstract ideas are translated and used in practice. While practice-based research has gained some momentum in the project management context (Blomquist 2010, Lalonde et al. 2010), PPM research is only beginning to adopt this new direction. We highlight some practice-based findings in PPM research, arguing that there is a need for PPM research to move more definitively into 'practice-based' approaches, and suggest an agenda with which to stimulate future research.

Our agenda builds on the convergence of strategic and practice-based perspectives in PPM research. Organizational strategy is increasingly delivered through the project portfolio, making PPM a core research theme in the general field of project management due to its focus on the oversight and holistic management of projects at a portfolio level. Research linking strategy and PPM has for some time been published in top management journals (Kwak and Anbari, 2009), and strategic theories and frameworks increasingly enhance research in project and portfolio management (Killen et al., 2012). 'Strategy-as-practice' researchers (Jarzabkowski, 2005; Johnson et al., 2007; Regnér, 2008), together with an emergent 'projects-as-practice' perspective (Blomquist et al., 2010; Lalonde et al., 2010, 2012), are shifting the gaze from strategy as it is conceived to how it is practiced in action. In this article we focus on PPM and related activities as means through which organizational strategy is translated, improvised and made sensible (Czarniawska and Sevón, 2005).

The practice-based perspective seeks to make sense of and examine how strategy is translated into a portfolio of projects. Using a practice-based approach advances understanding of how strategizing – as a process of sensemaking, improvisation and translation – is accomplished in a project environment (Jerbrant and Karrbom Gustavsson, 2013; Karrbom Gustavsson 2016). By attending to practice in situ, academic researchers aid practitioners by engaging with their performativity in integrating theory and practice in action (Konstantinou, 2015). Since practice-based research in PPM is still in its early stages, we believe it vital to "take stock" and depict what has already been done in that area to help advance the field as purposely as possible. Hence, this paper provides an overview of the literature on practice-based PPM research and propose avenues for further strengthening research in this area.

The paper is structured as follows. First, we provide a general review of the PPM literature and its relation to strategy. We then introduce our understanding of practice and the emergence of practice-based research approaches in PPM, with special attention to practice-based research relating to PPM and strategy. Building on this broad review of PPM research and our understanding of practice-based theories, we then propose an agenda to inspire and guide future research. Central to this agenda is a concern with various aspects of practice: its discursivity, intelligibility, dynamic capabilities, leadership and materiality.

2.0 The PPM Literature and strategy approaches

PPM acts as a bridge between strategy and projects. We take a broad view of PPM and define it as the overall organizational ability to manage the project portfolio strategically and holistically, the better to support the success of the organization (Killen and Hunt, 2010). Ensuring that projects are aligned with strategy and achieving portfolio balance are primary PPM goals in an ongoing process of prioritising, resourcing, and adjusting or terminating projects (Kester et al., 2011). PPM is constituted as a more strategic and higher-level function

than project management, albeit that they are interdependent (Brady and Davies, 2004; Keegan and Turner, 2002; Larson, 2004). Strategically, their interdependence is often viewed as a constraint on lower level practices in an organization. In this sense PPM emerges out of quite conventional strategy perspectives. Portfolio approaches to projects form a major part of organizational strategy, leading to an increasing focus on PPM studies in the wider project management community.

The volume of literature on PPM and its strong strategic emphasis is well documented (e.g. Filippov et al., 2010; Kester et al., 2011; Killen et al., 2012; Kwak and Anbari, 2009). Urhahn and Spieth (2013) propose that 'portfolio management governance' affords devices that enable an extension of PPM, and governance from a PPM perspective is also receiving increased attention from a range of authors. Doherty et al., (2012) find benefits from governance structures that manage projects as a portfolio rather than individually in their interpretive multiple case study research. Too and Weaver (2014), Thiry and Deguire (2007), and Jonas (2010) emphasise the strategic linkages in their conceptual models of governance in project portfolio environments, while Williams et al. (2010) analyse differences in the implementation of governance frameworks across four cases demonstrating differences in choices of strategies and the importance of tailoring governance to context. The strategic role played by portfolio managers and the importance of role clarity is highlighted in a range of empirical studies on governance in multi-project environments (Mosavi (2014; Blomquist and Muller, 2006 and Koh and Crawford 2012).

An increasingly common topic for PPM research is the interactions between different organizational components, especially in regard to how strategy is formulated and translated via the project portfolio into individual projects and subsequent benefits (Breese, 2012; Terlizzi et al., 2017; Doherty et al, 2012). The stream of research on strategy formation

usually uses a top-down perspective to make sense of the interactions between portfolios and projects. While this top-down perspective acknowledges and primarily focuses on rational mechanisms for their role in PPM, more recently researchers have called for an appropriate balance in the perspective, with more emphasis on structural, cultural, inter-personal and behavioural aspects (Jensen et al., 2016; Martinsuo et al., 2014; Stingl and Geraldi, 2017; Unger et al., 2014; Wynn et al., 2016). In addition, the bottom-up perspective of strategy formation provides an alternative view on "strategizing" in PPM research, with interest in emergent strategy now forming an influential theme.

Empirical research by Poskela et al. (2005) revealed that PPM processes are central to integrating strategic and operational activities in the front-end phase of innovation. Through 20 interviews with top managers, Poskela et al. found that a participative strategy formulation process that included top-down as well as bottom-up communication processes improved the integration of strategic and operative management, highlighting what is now a core feature of the practice-based perspective on strategy. This perspective is reflected in Thiry and Deguire's (2007) conceptual model of multi-project governance. The model proposes a two-way relationship between strategy and projects, where the project management office plays a role in top-down strategy communication and oversight, and also in collating and analysing data from projects from the bottom-up in order to reformulate strategy. More recently, Kopmann et al. (2017) explored emergent strategy and the interplay of top-down and bottom-up strategizing through a multi-informant survey. The study demonstrates the role of PPM in formulating and implementing deliberate strategy as well as in recognising and supporting emergent strategy; in turbulent contexts the importance of PPM support for emergent strategies is amplified, while PPM's role in delivering deliberately designed plans becomes less relevant as emergent strategy redefines how the project mission is being accomplished

The nexus between PPM and strategy emphasises the importance of understanding emergent strategy processes in order best to manage the totality of realised strategy. Mirabeau and Maguire (2014) conducted a practice-based study of emergent strategy in a telecommunications firm that provides a deeper understanding of the relationship than could be obtained through case studies, conceptual work and survey-based research. They demonstrated how projects initiated to solve local problems and operational issues influenced formal strategic directions emergently through a longitudinal study spanning nearly ten years. The practice-based method included direct involvement and observation augmented by a range of other data collection (including over 2,000 emails) and analysis methods. This type of study provides a methodological lens to capture the detailed reality of strategy processes to support deep analysis and understanding. While practice-based research has evident methodological implications, suggesting studying the actors' practices in situ in context, in their everyday work, there is a large theoretical literature that stands behind this methodology. These theoretical approaches place practice – what people do when working, when engaged in the practical accomplishment of their work – in central focus mediating individual agencies at work and the social institutions in which that work is grounded and enacted. Practices are 'embodied, materially mediated arrays of human activity centrally organized around shared practical understandings' (Schatzki, 2001: 2; see also Schatzki, 2002). These activities and understandings have long been a central focus for social science researchers concerned with the relation of structure and agency, such as Bourdieu (2002), Foucault (1979), Garfinkel (1967), Giddens (1984) and Turner (1994). In organization theory the work of Feldman and Orlikowski (2011) and Nicolini (2012) has focused on practice as something that members of organizations do, as an activity that draws on institutionalized norms embedded in the use of materials, methods and devices.

Practice-based research has been endorsed as one of the main conclusions of a review of the 'rethinking project management' agenda that has recommended a broader research perspective (Svejvig and Andersen, 2015). Practice-based studies provide insight into the everyday work world of increasingly complex, dynamic and interconnected project contexts in which conceptually strategic aspects are translated into practice. Addressing strategy as it is formulated is of little value if we do not understand the practices through which what is formulated as a design is constituted and sometimes resisted in practice. Studying the social organization of everyday work relations in key arenas, such as project leadership team meetings, is an important way of attending to strategy as practice, in practice. In doing so, the social reality of how normative models imposing linear rationality on the project process are used in practice can be investigated. Whether actuality and prescription concur is a moot question, one that a practice-oriented approach can explore.

3.0 Practice and practice-based research

Orlikowski (2015) suggests practice can be seen in three ways: as a phenomenon for which the central notion is what happens 'in practice' as opposed to what is derived or expected from 'theory'; as a perspective, in which a distinct way of looking at the world is developed; and as a philosophy that regards what we take for granted as social reality as something that depends on habituated ways of seeing. Practice is productive of those phenomena to which interested audiences attend, such as managers, critics and academic analysts. These practices constitute a reality by providing a distinct perspective on the world; to the extent that these perspectives constitute models of the world through means of representing, accounting for, normalizing and representing it as something surveyed, significant and salient, they assume world-making powers (Tsoukas 1998; Law and Urry 2004).

Strategy research has recently been transformed in focus through notions of practice. The community of 'strategy-as-practice' researchers is broadly defined as 'a network concerned with everyday processes, practices and activities involved in strategy' (Carter et al., 2011:27). By studying activities distributed throughout an organization, the study of 'strategy-as-practice' provides understanding of how strategies are implemented (Jarzabkowski, 2003; Johnson et al., 2007). By turning to questions of how strategy is enacted in practice rather than in design, and by focusing on implementation, empirical studies gained traction in the strategic management community. The 'strategy-as-practice' movement thus promoted the value of research grounded in the everyday practices used within organizations (Cook and Brown, 1999; Jarzabkowski and Wilson, 2006; Johnson et al., 2007; Whittington, 2003).

Similarly, practice-based studies are not entirely new to project management research. Precursors are Clegg's (1975) ethnomethodologically influenced discourse-based research of the management of projects and Morris and Hough's (1987) study of the 'reality' of projects through multiple perspectives. These research reports used what was, in effect, a practice-based lens to explore the wider context of project management practice. The former focused on power relations in projects while the latter looked at aspects such as strategy and finance, in addition to the traditional topics generally identified with 'project management'. More recently, the *Rethinking Project Management Network* (Cicmil et al., 2006) has urged project management researchers to study projects in practice, prompting a surge in publications about the importance of practice-based research in project management (see, for example, Klein et al., 2015; Floricel et al, 2014; O'Leary and Williams, 2013; Hällgren and Söderholm, 2011; Blomquist et al., 2010; Lalonde and Bourgault, 2013; Lalonde et al., 2010, 2012; Sauer and Reich, 2009). Practice-based studies emphasize the importance of communication and negotiation skills, and highlight the disjoint between an ideal based on the rational assumptions common in project and portfolio management, and the tensions that exist in

reality due to differing perspectives and interpretations (Breese, 2012; Coombs, 2015; Mosavi, 2014).

The importance of practice and context has been repeatedly highlighted in PPM research. Martinsuo (2013) suggests that what is done in PPM practice differs greatly from its idealization in decision-making theory. For example, practice-based studies reveal deviations from expected PPM processes as unauthorised projects consume valuable resources to the detriment of authorised project success (Blichfeldt and Eskerod, 2008). Decisions are not made following rational assumptions but are strongly influenced by context in a process of learning and negotiation (Christiansen and Varnes, 2008). Executive behaviours are found to skew portfolio decisions on project terminations, rendering them less rational than portrayed (Lechler and Thomas, 2015). The influence of contextual factors (such as different management styles, organizational cultures, or levels of complexity or change) on PPM decision-making is observed in multiple practice-oriented studies (see, for example, Biedenbach and Müller, 2012; Blomquist and Muller, 2006; Dietrich, 2006; Kock et al., 2016; Loch, 2000; Olsson, 2008; Unger et al., 2012), while the influence of power relations are shown to be especially strong in other in-depth studies (Clegg and Kreiner, 2013; Kester et al., 2011).

PPM studies can draw on existing practice-based perspectives that offer an opportunity to focus on the growing interrelation of institutional theory and practice oriented perspectives (Zietsma and Lawrence, 2010; Smets et al., 2015), especially as these are embedded in institutional logics (Thornton, 2004; Thornton et al., 2012) or shaped by institutional entrepreneurship (Tracey et al., 2011). The influence of power relations on the processes used for portfolio-level management are evident in the ways in which innovative institutional logics can frame KPIs around themes of sustainability, for instance, creating new forms of

institutional work in practice, such as thinking in the 'future perfect' in order to accomplish not only cost and schedule requirements but also to achieve sustainable ecological and community outcomes (Pitsis et al., 2003).

4.0 Directions for future practice-based PPM research

While strategy and related topics are currently the main concern of practice-based PPM research, practice-based studies allow researchers to investigate the underlying practices of managing a portfolio of projects. There are many opportunities for practice-based research into PPM. For instance, the project selection and re-prioritization stages are particularly fruitful for practice-based research because it is in these moments and situations in which the links between organizational strategies as formally conceived are translated into project practice. Specifically identifying such opportunities can help guide and expedite the growth of practice-based research in PPM, and provide meaningful insights for researchers and practitioners.

In the remainder of the paper, we therefore propose an agenda for extending practice-based perspectives in PPM drawing upon recent work linking strategy and practice (Clegg, Schweitzer, Whittle and Pitelis, 2017). In tailoring the agenda to PPM, our approach is informed by close attention to the relation between power and language: we look at discursive practices generally; we then move on to consider gendered aspects of these relations. Shifting the focus from the discursive to the more organizational level we switch focus to those dynamic capabilities that constitute a shifting resource base embedding an organizations' competitiveness through an evolving ability to adapt to change. Unless dynamic capabilities find expression and recognition in leadership they are as nought; hence we extend the power focus to leadership. Finally, in response to the rapidly developing sociomateriality agenda in social science we acknowledge the power of materialities:

especially those tools that enable PPM practices. We have considered the skills required to develop and transfer a strategy across a portfolio of different projects to propose an agenda to guide future research on practice-based PPM. We start with a call for PPM research investigating performativity through discursive practice, and then follow with four further themes for practice-based PPM research (intelligibility, dynamic capabilities, leadership and materiality). In doing so, we join forces with the recent paper in this journal by Havermans et al (2015: 976) in which they state that 'A strategic understanding of language and narratives and their role is useful for project and program managers as it opens opportunities for shaping emergent narratives and in so doing shaping the progress of projects.'

4.1 Investigating performativity through discursive practice

How language is used frames issues (Mantere, 2013). One aspect of the medium by which discursive practices are accomplished is through the dominant stories in play in project arenas, particularly whose narratives they are and where they are situated spatially and temporally in the division of labour. Vaara and colleagues (2005) examined how discursive practices can be used to legitimate and de-legitimate strategic options, how discourse is appropriated and resisted (Laine and Vaara 2007) and how discourses effect participation in decision-making (Mantere and Vaara, 2008), all approaches that can be parlayed into a concern with PPM. In practice, narratives have to be flexible in order to accommodate changing circumstances, positioned in one way for one project context then in another in the portfolio; they are often adjusted and reformulated for different audiences in order to make the strategic framework look – a posteriori – more successful, farsighted and flawless than in actuality.

Top management in organizations draw upon discursive skills in the use of such devices as rhetoric, representational techniques, models and other devices, emotions and meetings. One

way of thinking about how such strategy is conceived and practiced is to concentrate on its performative elements, how it is enacted in practice. Discursive practices that translate abstract strategies into operational tasks and goals structure and frame project realities by offering a distinct perspective on how specific problems and solutions can be identified.

How strategy is initially communicated can be considered in the unfolding context of practice in future research. Key issues will be constructing convincing, sincere and intelligible accounts (Samra-Fredericks, 2005). The pragmatic validity claims of truth, correctness and sincerity are normal and constitutive features of almost all interaction settings in which, typically, we take for granted that the other is committed to these protocols.

Strategizing turns strategy into practice, which usually entails developing a projection of the future that will frame immediate courses of action. In this sense, the future becomes the condition of possibility for action in the present. It is in this way that strategizing is a performative practice that has too often proven subsequently to be a strategic misrepresentation:

> [W]hen forecasting the outcomes of projects, forecasters and planners deliberately and strategically overestimate benefits and underestimate costs in order to increase the likelihood that it is their projects, and not the competition's, that gain approval and funding. Strategic misrepresentation can be traced to political and organizational pressures, for instance competition for scarce funds or jockeying for position, and to lack of incentive alignment. (Flyvbjerg, 2008: 6)

Flyvbjerg (1998) demonstrated how, in the context of urban planning a portfolio of projects in the Danish city of Aalborg, the different agencies and authorities involved in the planning arena sought to rationalize their strategy as the one to be followed. Flyvbjerg analysed

strategic situations in which the collective rationality deployed by different groups of people with common vested interests sought to exercise power. Those who were in positions of dominance paid least heed to the rationality of their arguments, were less inclined to rationalize their positions and more inclined to advance them as if they were just common sense. Where actors, such as politicians, were in positions of high power and formal authority they were better able to project their strategies with less invested in rationalizing them. When reality undermined performativity and irrationality became evident politicians often will have vacated office and the scene. Similarly, senior managers in organizations often push 'pet' projects without justification and accountability for implementation (Loch, 2000; Flyvbjerg 2003; Lechler and Thomas 2015).

An evident research question is to look at how political elites sponsor projects using different rhetorical practices at different times in the life of the project. The best way of researching unfolding performance in the temporality of the project is to compile a log of benefit claims advanced at various stages in the project life cycle, from sponsorship through initiation to accomplishment and post project performance. The researcher should be looking for mission shrinkage, especially, as optimistic projections for utilization and completion dates are scaled back while those for costs are scaled up. Because much of the strategy work that launches a project has a high degree of rhetorical content, the predictive and truth-value of these claims can frequently be slight. Discursive practices are thus vital tools for strategizing in a project environment and future research would be advised to investigate the role that these play as drivers for turning strategy into practice. During phases for project prioritization and selection at the front end of PPM, discourse plays a strong role in project justification, evaluation, negotiation, and perhaps strategic misrepresentation; future research may evaluate both top-down and bottom-up influences in these phases. How and to what extent are discursive practices used in PPM to prioritise, resource, adjust or terminate projects, both

from the top down (i.e. politicians, senior managers) or the bottom up (i.e. project team members, public stakeholders)? From a top-down perspective, the role of political leadership in organizations is at issue. From a bottom up perspective, the social construction of commitment and legitimacy is important.

4.2 Investigating how practice is represented

Hodgson (2002) explains how project managers' talk is deployed to represent professional credibility in multi-professional contexts (Hodgson, 2002). Discursively, professional credibility requires a confident performance, one that is usually gendered and projected through masculine tropes: being deemed confident, assertive, somewhat emphatic and perhaps, even aggressive. The existence and effects of the prevailing discourse as 'masculine' has been explored in project management contexts (Olofsdotter & Randevåg, 2016; Crevani & Lennerfors, 2009; Buckle & Thomas, 2003; Thomas & Buckle-Henning, 2007); however the gendered nature of PPM discourse is yet to be explored. How emotions are registered and displayed in the appropriate keys of deference and domination, aggression and appeasement, depending on the status ordering of speakers and hearers is important. Performative skills in using emotion (Brundin and Liu, 2015) are required as well as in the more general skilled use of language registers.

Although PPM studies regularly reveal a strong focus on communication, most emphasize the communication of decisions rather than address the ways in which the communication is used in the process of strategizing (Mosavi, 2014). Strategic fit is repeatedly highlighted as a primary aim of PPM with large-scale survey research showing that managers play a significant role is steering and controlling the strategic direction of the project portfolio (Beringer et al., 2013; Kopmann et al., 2015; Kopmann et al., 2017). Further research could explore more deeply *how* managers steer and control the strategic direction of the project

portfolio in PPM environments and what types of gendered language and behaviours support PPM goals. In particular, specifically focusing on gendered aspects of discursive practices (e.g. language use, rhetoric) is a vital component of understanding how PPM is practiced.

In addition, an evident research question involves paying close attention to meeting protocols, especially to the forms of language use in key project meetings. Samra-Fredericks (2003) suggests analysing how linguistic skills construct strategic realities, including a shared definition of the future. According to Samra-Fredricks (2003: 143), we need to analyse 'real-time' talk-based interaction in order to see how ideas are 'made to count'. Analysing naturally occurring conversations demonstrates the ways in which opening meeting remarks set the scene for what subsequently unfolded: *these are the strategic opportunities; these are the desired innovations; that is the deadline*. Words and images create a world that those privy to the project meetings need to understand, defining and using legitimate categories and social constructions (Gutiérrez & Magnusson, 2014). Close empirical attention to language use, rhetoric, categories in use and the projection of emotions will enable project researchers to identify the elements not only of 'winning' performances but those that elapsed project time demonstrates are more authentically real. What is important is to be able to research the different ways in which a project is made intelligible in different contexts: public forums; portfolio review board meetings, project meetings; interviews in the media. In what ways is language gendered, to what effect? What are the subtle differences in positioning and content? Often it is the variance amongst different types of accounts that is most revealing.

4.3 Investigating dynamic capabilities in practice

Strategy does not flow straight from conception to execution in an idealized trajectory so much as become enacted through numerous, recursive and reflexive enactments and translations. To be able to be creatively engaged in enactment, an organization's design and

personnel must allow for organizational agility, because objectives change as implementation proceeds in dynamic contexts and environments. Thus, the practice of implementation mediates the enactment of strategy. In these strategic enactments, an organization's 'dynamic capabilities' (Eisenhardt and Martin, 2000; Helfat et al., 2007; Teece, 2007; Teece et al., 1997) enable the organization 'purposely [to] create, extend, and modify its resource base' (Helfat et al., 2007: 4), facilitating agility, adaptation and change.

Practice-based strategy research has been shown to have particular strengths in exploring dynamic capabilities (Killen et al., 2012; Regnér, 2008). Ostensive and performative aspects of dynamic capabilities provide a strong theoretical foundation for practice-based research on project management and strategy (Biesenthal, 2013). In project portfolio management research, the dynamic capabilities of organizational agility, competitive advantage and environmental change have been explored using a practice-based research lens (Gardiner, 2014; Kester, 2011; Killen and Hunt, 2010; Killen et al., 2007; Petit, 2012). These examples illustrate the increasing importance of research on themes such as capability evolution, flexibility, strategic change and the ability to adapt to dynamic environments through new ways of working and allocating (Engwall and Jerbrant, 2003). However, much of this research has looked at dynamic capabilities from a top-down perspective, where change is facilitated and enforced from the organizational level. As outlined earlier in this paper, this view fails to capture the entirety of ways in which change can take place in a project environment. Practice-based research is well placed to capture such change; in one study practice-based research provided a perspective that revealed much creativity and improvisation in enactment (Clegg and Kornberger, 2015). Projects rarely unfold according to plan: instead, they are translated in situ through practices enacted by leaders through negotiations, conflicts and improvisations (Clegg and Courpasson, 2004). Hence, dynamic capabilities possess a bottom-up element where change occurs from within the project, often

based on the improvisational nature of the project leader or other members of the project team. These dynamic capabilities require further research attention.

Samra-Fredericks (2003) has identified several factors defining dynamic capabilities for the leadership of strategy. These are the ability, first, to draw on a tacit competence in using locally and situationally meaningful and typical categories to construct a compelling story of the organization. In PPM, the ability to refer recursively to previous projects as exemplars of the issues under discussion is significant, favouring mature experience over that which is relatively shallow. Second, the skilled use of pronouns that collect or divide – 'we', 'us', the 'organization', the 'team' as opposed to 'them', the 'competition', people who are not 'team players', and so on, is particularly important. This is especially so in PPM because of the diverse interests of project partners and stakeholders. Third, skilled project leaders simultaneously curb possibilities for counter moves by others (because they would be outside the bounds of what has been constituted as being reasonable), often leaving others wondering how they have been out-manoeuvred. Again, this is a key project skill in PPM, where different forms of contractual framing will often privilege the ability of project leaders who are able to do this successfully. Finally, exposure of PPM leaders to many projects across their careers should make them great practical historians with an ability to weave past, present and future together from discursively available characterizations, plot lines and themes, as a key dynamic capability of project leadership in temporary organizations. In this vein, 'path dependency' (Teece et al., 1997), the influence of past and future activities and options, is an important component of PPM's role as a dynamic capability (Killen et al., 2007).

Employing a dynamic capabilities perspective with a practice-based research approach will enable future PPM research to better understand its strategic role and influence. Recent

survey research suggests a role for PPM in strategy emergence and response to environmental change (Kopmann et al., 2017); however, there is much to learn about the mechanisms and possibilities of steering emergence. Practice based research targeting organizations or industries experiencing external change could explore whether and how PPM recognises or influences emergent strategies. PPM capability evolution is an essential aspect to be explored; dynamic capabilities must change and evolve to remain relevant (Teece et al., 1997). Daniel et al. (2014) observe PPM acting as a dynamic capability in information systems projects, and call for longitudinal future research to investigate the dynamics of capability change. Such longitudinal research could take an action research approach, or follow the actors in how a network of capabilities is constructed, employing periodic observation and document analysis to track capability evolution. Changes to capabilities can be triggered by actors, not only the project leader but also by the emergence of collaborative qualities at large that the PPM approach facilitates and makes evident. The neglected dynamic capability of narrative acuity, addressed by Havermans et al. (2015) in their investigation of how PPM narratives frame emergent problem resolution, is a key issue. Different narratives for different audiences may well be strategically appropriate but poses the danger of complex emergent problem resolution appearing paradoxical as contradictory accounts cumulate and are correlated by interested parties. Future studies could take a wide organizational perspective to investigate the interplay between change, emergence, actions and collaborations.

4.4 Investigating leadership in practice

A portfolio approach requires portfolio leadership. While PPM research emphasizes the role and impact of top management in shaping and delivering strategy (Cooper et al., 2004; Hermano and Martín-Cruz, 2016), recent studies indicate that PPM strategy is also influenced

and led from the bottom up (Hutchison-Krupat and Kavadias, 2015; Killen and Hunt, 2010; Kopmann et al., 2017). Investigation into distributed leadership finds that experts in projects are better able to make decisions when leadership is a shared domain (Cox et al., 2003; Lindgren and Packendorff, 2009; Muller et al., 2015).

'Situated leadership' is especially important for PPM, enabling contextual and improvisational response to unfolding management challenges (Jerbrant and Karrbom Gustavsson, 2013). Leadership action has a 'teleoaffective' (Schatzki, 2001) structure, rendered purposive and sensible by linking ends, means and emotions appropriate to a particular set of practices (Kester et al., 2011; Killen et al., 2008; Loch, 2000). To respond effectively to changing environments, PPM leadership can oversee capability evolution and encourage 'planned emergence' (Grant, 2003; Kopmann et al., 2017; Thomas and Ambrosini, 2015). One way of doing this in PPM is to appoint project champions for rotating periods to advocate and lead specific key performance indicators, especially where these extend beyond the usual concerns with costs and schedule (Pitsis et al., 2003; also see Nordqvist and Melin, 2008). Such project champions work by 'seeking to affect the opinions or activities of superiors, peers and subordinates, seeking to change the organization or its systems, seeking to secure resources and so on' (Mantere, 2005: 157). For instance, in a project to build Olympic infrastructure a system of alternating champions was used not only to represent different KPIs in the project but also to facilitate organizational learning and enhanced sensitivity to different professional interests: engineers championing the environment; environmentalists championing progress, and so on (Pitsis et al., 2003). Situated leadership is particularly important at the intersection of project management and PPM practices, such as is presented in the example above.

Project leaders need to be able to communicate that they are performing competently, often in managing mutually divergent goals, such as innovation, cost control, schedule and quality. For instance, Gil (2010) shows how contexts in which there are conflicting interests with external stakeholders are managed. The specific ways in which issues are framed and how they connect overall strategic intent with project action (Smith, Ashmos Plowman, and Duchon, 2010) are important.

Large-scale survey research suggests that PPM leadership has a role to play in ensuring the future orientation of the portfolio (Rank et al, 2015), and calls for further research on the interplay between leadership and other portfolio factors. Different project leadership approaches are called for in different contexts; future practice-based research can investigate 'situated leadership' within various project portfolio contexts. Future studies could also explore the role of leadership in strategizing, and in enabling dynamic response and steering emergent strategy through PPM.

4.5 Investigating materialities in practice

Tools are vital, as Heracleous and Jacobs (2008) argue; what is important is how they are used, as Seidl (2007) and Jarzabkowski and Wilson (2006) report. The tools used in formulating the portfolio for PPM include project reporting templates and graphical information displays (portfolio maps, stop light reports, dashboards). The use of tools to represent data graphically is shown to assist with the communication of strategy (Bresciani and Eppler, 2010); in the PPM context, such graphical representation supports team-based strategic decision-making in project portfolio review boards (Killen and Kjaer, 2012; Mikkola, 2001, Geraldi and Arlt, 2015a,b).

Drawing on Actor Network Theory, tools can function as potential ‘boundary objects’ (Star & Griesemer, 1989). A boundary object allows communication across the boundaries of organizations, between different divisions, disciplines and departments (also see Ewenstein and Whyte, 2009; Karrbom Gustavsson, 2016; Wright et al., 2013). To this end, judicious use of boundary objects, such as prototype models of architectural detail that is difficult to envisage (Naar and Clegg, 2016), can steer the development of shared understanding among different stakeholders and act as conflict mediators in project environments (Lee-Kelley and Blackman, 2012; Iorio & Taylor, 2014). In PPM, boundary objects such as data visualisations and state gate artefacts serve as catalysts for discussion in decision meetings (Johanssen et al., 2011). The PPM meeting is a key arena of action: in meetings, strategies can be unveiled, resistance sniffed out, support garnered or opposition incubated. These project meetings can promote self-actualization, dialogue and concreteness, enabling greater participation (Jarzabkowski and Seidl, 2008).

Spee and Jarzabkowski (2009) suggest that tools, such as those used in project and portfolio management, work in practice, both instrumentally as means to a desired end and symbolically. Typical management tools provide a common language (Barry and Elmes, 1997; van der Heijden, 2005). Tools enable politics to be played by other means, by hampering shared meaning, particularly across hierarchical levels, by structuring and shaping information (Grant, 2003) and legitimizing powerful interests (Hill and Westbrook, 1997), obscuring when and how project portfolio decisions actually occur (Christiansen and Varnes, 2008).

Materialities have been shown to be vital tools in project environments (e.g. construction projects, Styre 2017; software development, Doolin and McLeod, 2012; product and service development, Carlile 2002; Yoo et al., 2012), however materialities have been scarcely

acknowledged at the portfolio level (Johanssen et al., 2001; Christensen and Varnes, 2008). Materialities, whether physical or digital (Leonardi, 2010), can be further investigated in PPM research as drivers that can aid or hinder strategy becoming practice. Practice-based research focusing on project prioritisation and selection at the front end, or on project re-prioritisation or termination, may reveal insights on both top-down and the bottom up influences of materialities. Observations of decision meetings and analysis of related artefacts would provide rich data for analysis of how materialities are used in PPM practice, and guide further action-oriented studies on whether and how new types of artefacts can improve PPM practice.

5.0 Conclusion

We have formulated an agenda for future research that draws on the practice-based literature. Such a research agenda accelerates the growth of practice-based research in PPM and provides a clear direction for the field to advance. Research into the performativity of PPM's discursive practices; how practice is made intelligible across different PPM contexts; what dynamic capabilities require developing for successful PPM; what leadership practices are required in PPM; and the role that different materialities play in its practice define the research agenda we have prepared. These themes and research areas illustrate how a practice perspective can enable rich and detailed exploration to generate in-depth understanding, with the ultimate aim of improving project success.

Building on the existing work on PPM and strategy that uses a practice-based approach offers a ripe starting point for further practice-based research in related areas. For instance, research on the structuring of the project portfolio has led to increased scrutiny of the strategic positioning of projects from both top-down and bottom-up mechanisms. By investigating

dynamic capabilities using a practice-based lens, it is possible to illustrate how the convergence of traditional theories and new research lenses can advance the discipline.

Importantly, practice-based research findings that better reflect how portfolios are actually managed should lead to improvements in management. To contribute to the ongoing strengthening of practice-based research on PPM, we have formulated a practice-oriented research agenda that opens up a wide range of new avenues for investigating links between PPM and strategy.

References

Archibald, R.D., 2003. Managing High-Technology Programs and Projects. John Wiley & Sons, Hoboken.

Barry, D., Elmes, M., 1997. Strategy retold: Toward a narrative view of strategic discourse. Academy of Management Review, 22(2), 429–452.

Beringer, C., Jonas, D., Kock, A., 2013. Behavior of internal stakeholders in project portfolio management and its impact on success. International Journal of Project Management, 31(6), 830–846. doi: http://dx.doi.org/10.1016/j.ijproman.2012.11.006

Biedenbach, T., Müller, R., 2012. Absorptive, innovative and adaptive capabilities and their impact on project and project portfolio performance. International Journal of Project Management, 30(5), 621–635. doi: 10.1016/j.ijproman.2012.01.016

Biesenthal, C., 2013. Projects as arenas for pragmatic management practices: Improvisation, capabilities and change. PhD Thesis, University of Technology Sydney, Sydney.

Blichfeldt, B.S., Eskerod, P., 2008. Project portfolio management – There's more to it than what management enacts. International Journal of Project Management, 26(4), 357–365.

Blomquist, T., Hällgren, M., Nilsson, A., Söderholm, A., 2010. Project-as-practice: In search of project management research that matters. Project Management Journal, 41(1), 5–16.

Blomquist, T., Muller, R., 2006. Practices, roles, and responsibilities of middle managers in program and portfolio management. Project Management Journal, 37(1), 52–66.

Bourdieu, P., 2002. Outline of a Theory of Practice. Cambridge University Press, Cambridge.

Brady, T., Davies, A., 2004. Building project capabilities: From exploratory to exploitative learning. Organization Studies, 25(9), 1601–1621. doi: 10.1177/0170840604048002

Breese, R., 2012. Benefits realisation management: Panacea or false dawn? International Journal of Project Management, 30(3), 341–351. doi: https://doi.org/10.1016/j.ijproman.2011.08.007

Bresciani, S., Eppler, M.J., 2010. Choosing knowledge visualizations to augment cognition: the manager's view. Paper presented at the Information Visualisation (IV), 2010 14th International Conference on Information Visualisation, 26–29 July, London.

Brundin, E., Liu, F., 2015. The role of emotions in strategizing, in: Golsorkhi, D., Rouleau, L., Seidl, D., Vaara, E. (Eds.), Cambridge Handbook of Strategy as Practice: second ed. Cambridge University Press, Cambridge, pp. 632–646.

Buckle, P., & Thomas, J. (2003). Deconstructing project management: a gender analysis of project management guidelines. International Journal of Project Management, 21(6), 433-441.

Carlile, P. R. (2002). A Pragmatic View of Knowledge and Boundaries: Boundary Objects in New Product Development. Organization Science, 13(4), 442-455.

Carter, C., Clegg, S., Kornberger, M., and Schweitzer, J., 2011. Strategy: Theory and Practice. Sage Publications, London.

Christiansen, J.K., Varnes, C., 2008. From models to practice: Decision making at portfolio meetings. International Journal of Quality & Reliability Management, 25(1), 87–101.

Cicmil, S., Williams, T., Thomas, J., Hodgson, D., 2006. Rethinking project management: Researching the actuality of projects. International Journal of Project Management, 24(8), 675–686.

Clegg, S. R., and Courpasson, D., 2004, 'Political Hybrids: Tocquevillean Views on Project Organizations', Journal of Management Studies 41(4): 525-547.

Clegg, S. R., and Kornberger, M., 2015, Analytical frames for studying power in strategy as practice and beyond, pp. 389 to 404 in Golsorkhi, D., Rouleau, L., Seidl, D., and Vaara, E. (eds) Handbook of strategy as practice. Cambridge: Cambridge University Press.

Clegg, S., Kreiner, K., 2013. Power and politics in construction projects, in: Drouin, N., Muller, R., Sankaran, S. (Eds.), Novel Approaches to Organizational Project Management Research: Translational and Transactional. CBS Press, Copenhagen, pp. 268–293.

Clegg, S.R., 1975. Power, Rule, and Domination: A Critical and Empirical Understanding of Power in Sociological Theory and Organizational Life (Vol. 6). Routledge and Kegan Paul, London and Boston.

Clegg, S.R., Schweitzer, J., Whittle, A., Pitelis, C., 2017. Strategy: Theory and Practice, second ed. Sage Publications, London.

Cook, S.D.N., Brown, J.S., 1999. Bridging epistemologies: The generative dance between organizational knowledge and organizational knowing. Organization Science, 10(4), 381–400.

Coombs, C.R., 2015. When planned IS/IT project benefits are not realized: A study of inhibitors and facilitators to benefits realization. International Journal of Project Management, 33(2), 363–379. doi: https://doi.org/10.1016/j.ijproman.2014.06.012

Cooper, R.G., Edgett, S.J., Kleinschmidt, E.J., 2004. Benchmarking best NPD practices - II. Research Technology Management, 47(3), 50–59.

Cox, J.F., Pearce, C.L., Perry, M.L. 2003. Toward a model of shared leadership and distributed influence in the innovation process: How shared leadership can enhance new product development team dynamics and effectiveness. In Pearce, C.L., Conger, J.A. (Eds.), Shared Leadership. SAGE Publications Inc, USA, Thousand Oaks, CA, pp. 48–76.

Crevani, L., & Lennerfors, T. S. (2009). Pull yourselves together, guys! A gendered critique of project managers' ethics in a public sector context. ephemera, 113-130.

Czarniawska, B., Sevón, G., 2005. Global Ideas: How Ideas, Objects, and Practices Travel in the Global Economy. CBS Press, Copenhagen, Denmark.

Daniel, E. M., Ward, J. M., & Franken, A. (2014). A dynamic capabilities perspective of IS project portfolio management. The Journal of Strategic Information Systems, 23(2), 95-111.

Dietrich, P., 2006. Mechanisms for inter-project integration - empirical analysis in program context. Project Management Journal, 37(3), 49–61.

Doherty, N.F., Ashurst, C., Peppard, J., 2012. Factors affecting the successful realisation of benefits from systems development projects: findings from three case studies. Journal of Information Technology, 27(1), 1–16. doi: 10.1057/jit.2011.8

Doolin, B., & McLeod, L. (2012). Sociomateriality and boundary objects in information systems development. [journal article]. European Journal of Information Systems, 21(5), 570-586.

Eisenhardt, K., Martin, J., 2000. Dynamic capabilities: What are they? Strategic Management Journal, 21, 1105–1121.

Engwall, M., Jerbrant, A., 2003. The resource allocation syndrome: the prime challenge of multi-project management? International Journal of Project Management, 21(6), 403–409.

Ewenstein, B., Whyte, J., 2009. Knowledge practices in design: The role of visual representations as 'epistemic objects'. Organization Studies, 30(1), 7–30. doi: 10.1177/0170840608083014

Feldman, M.S., Orlikowski, W.J., 2011. Theorizing practice and practicing theory. Organization Science, 22(5), 1240–1253.

Filippov, S., Mooi, H., van der Weg, R., 2010. The strategic role of project portfolio management: Evidence from the Netherlands. Paper presented at the Proceedings of the 7th International Conference on Innovation & Management, Wuhan University of Technology, 4–5 December, China.

Floricel, S., Bonneau, C., Aubry, M., & Sergi, V. (2014). Extending project management research: Insights from social theories. *International Journal of Project Management, 32*(7), 1091-1107. doi: https://doi.org/10.1016/j.ijproman.2014.02.008

Flyvbjerg, B., 1998. Rationality and Power: Democracy in Practice. University of Chicago Press, Chicago.

Flyvbjerg, B., 2008, Curbing Optimism Bias and Strategic Misrepresentation in Planning: Reference Class Forecasting in Practice. European Planning Studies 16(1): 3-21.

Foucault, M., 1979. Discipline and punish. Penguin Books, Harmondsworth, UK.

Gardiner, P.D., 2014. Creating and appropriating value from project management resource assets using an integrated systems approach. Procedia-Social and Behavioral Sciences, 119, 85–94.

Garfinkel, H., 1967. Studies in Ethnomethodolgy. Prentice Hall, Evanston, IL.

Geraldi, J., & Arlt, M. (2015). Visuals Matter! Designing and using effective visual representations to support project and portfolio decisions. Newtown Square, PA: Project Management Institute.

Geraldi, J., & Arlt, M. Confident and" wrong"? (2015) Towards a mindful use of visuals in project portfolio decisions. Paper presented at the IRNOP 2015 Conference.

Giddens, A., 1984. The Constitution of Society. Polity, Cambridge.

Gil, N.A., 2010. Language as a resource in project management: a case study and a conceptual framework. IEEE Transactions on Engineering Management 57 (3), 450–462.

Grant, R.M., 2003. Strategic planning in a turbulent environment: Evidence from the oil majors. Strategic Management Journal, 24(6), 491-517. doi: 10.1002/smj.314

Gutiérrez, E., Magnusson, M., 2014. Dealing with legitimacy: A key challenge for Project Portfolio Management decision makers. International Journal of Project Management, 32(1), 30–39. doi: http://dx.doi.org/10.1016/j.ijproman.2013.01.002

Hällgren and Söderholm, 2011 M. Hällgren, A. Söderholm Projects-as-practice: new approach, new insights P.W.G. Morris, J.K. Pinto, J. Söderlund (Eds.), The Oxford Handbook of Project Management, Oxford University Press, Oxford, UK (2011), pp. 500-518

Havermans, L. A., Keegan, A., Den Hartog, D. N. 2015. Choosing your words carefully: Leaders' narratives of complex emergent problem resolution, International Journal of Project Management 33 (2015) 973–984

Helfat, C., Finkelstein, S., Mitchell, W., Peteraf, M., Singh, H., Teece, D., Winter, S.G., 2007. Dynamic Capabilities: Understanding Strategic Change in Organizations. Blackwell Publishing, Malden, MA.

Heracleous, L., Jacobs, C., 2008. Crafting strategy: The role of embodied metaphors. Long Range Planning, 41(3), 309–325.

Hermano, V., Martín-Cruz, N., 2016). The role of top management involvement in firms performing projects: A dynamic capabilities approach. Journal of Business Research, 69(9), 3447–3458. doi: http://dx.doi.org/10.1016/j.jbusres.2016.01.041

Hill, T., Westbrook, R., 1997.) SWOT analysis: It's time for a product recall. Long Range Planning, 30(1), 46–52.

Hodgson, D., 2002. Disciplining the professional: the case of project management. Journal of Management Studies 39 (6), 803–821.

Hutchison-Krupat, J., Kavadias, S., 2015. Strategic resource allocation: Top-down, bottom-up, and the value of strategic buckets. Management Science, 61(2), 391–412. doi: doi:10.1287/mnsc.2013.1861

Iorio, J., & Taylor, J. E. (2014). Boundary object efficacy: The mediating role of boundary objects on task conflict in global virtual project networks. International Journal of Project Management, 32(1), 7-17. doi: https://doi.org/10.1016/j.ijproman.2013.04.001

Jarzabkowski, P. and Seidl, D., 2008. The role of meetings in the social practice of strategy, Organization Studies, 29(11). 1391-1426.

Jarzabkowski, P., 2003. Strategic practices: An activity theory perspective on continuity and change. Journal of Management Studies, 40(1), 23–55.

Jarzabkowski, P., 2005. Strategy as Practice: An Activity-Based Approach. Sage, London.

Jarzabkowski, P., Wilson, D.C., 2006. Actionable strategy knowledge: A practice perspective. European Management Journal, 24(5), 348–267.

Jensen, A., Thuesen, C., Geraldi, J., 2016. The projectification of everything: Projects as a human condition. Project Management Journal, 47(3), 21–34.

Jerbrant, A., & Karrbom Gustavsson, T., 2013. Managing project portfolios: balancing flexibility and structure by improvising. International Journal of Managing Projects in Business, 6(1), 152-172. doi:10.1108/17538371311291071

Johansson, C., Hicks, B., Larsson, A. C., & Bertoni, M. (2011). Knowledge maturity as a means to support decision making during product-service systems development projects in the aerospace sector. [Article]. Project Management Journal, 42(2), 32-50.

Johnson, G., Langley, A., Melin, L., Whittington, R., 2007. Strategy as Practice: Research Directions and Resources. Cambridge University Press, Cambridge.

Jonas, D., 2010. Empowering project portfolio managers: How management involvement impacts project portfolio management performance. International Journal of Project Management, *28*(8), 818–831. doi: 10.1016/j.ijproman.2010.07.002

Karrbom Gustavsson, T., 2016. Organizing to avoid project overload: The use and risks of narrowing strategies in multi-project practice. International Journal of Project Management, 34(1), 94-101. doi: http://dx.doi.org/10.1016/j.ijproman.2015.10.002

Keegan, A., Turner, J., 2002. The management of innovation in project-based firms. Long Range Planning, 35(4), 367–388.

Kester, L., Griffin, A., Hultink, E.J., Lauche, K., 2011. Exploring portfolio decision-making processes. Journal of Product Innovation Management, 28(5), 641–661. doi: 10.1111/j.1540-5885.2011.00832.x

Killen, C.P., Hunt, R.A., 2010. Dynamic capability through project portfolio management in service and manufacturing industries. International Journal of Managing Projects in Business, 3(1), 157–169.

Killen, C.P., Hunt, R.A., Kleinschmidt, E.J. 2007. Dynamic capabilities: Innovation project portfolio management. Paper presented at the Proceedings of ANZAM 2007, 4–7 December, Sydney, Australia.

Killen, C.P., Hunt, R.A., Kleinschmidt, E.J. 2008. Project portfolio management for product innovation. *International Journal of Quality and Reliability Management, 25*(1), 24–38.

Killen, C.P., Jugdev, K., Drouin, N., Petit, Y. 2012. Advancing project and portfolio management research: Applying strategic management theories. International Journal of Project Management, 30(5), 525–538. doi: 10.1016/j.ijproman.2011.12.004

Killen, C.P., Kjaer, C., 2012. Understanding project interdependencies: The role of visual representation, culture and process. International Journal of Project Management, 30(5), 554-566

Klein, L., Biesenthal, C., & Dehlin, E. (2015). Improvisation in project management: A praxeology. *International Journal of Project Management*, *33*(2), 267-277. doi: https://doi.org/10.1016/j.ijproman.2014.01.011

Kock, A., Heising, W., Gemünden, H.G., 2016. A contingency approach on the impact of front−end success on project portfolio success. Project Management Journal.

Koh, A., & Crawford, L. (2012). Portfolio Management: The Australian Experience. *Project Management Journal*, *43*(6), 33-42. doi:10.1002/pmj.21300

Konstantinou, E., 2015. Professionalism in project management: Redefining the role of the project practitioner. Project Management Journal, 46(2), 21–35. doi: 10.1002/pmj.21481

Kopmann, J., Kock, A., Killen, C.P., Gemuenden, H.G., 2015. Business case control in project portfolios: An empirical investigation of performance consequences and moderating effects. IEEE Transactions on Engineering Management, 62(4), 529–543. doi: 10.1109/tem.2015.2454437

Kopmann, J., Kock, A., Killen, C.P., Gemuenden, H.G., 2017. The role of project portfolio management in fostering both deliberate and emergent strategy. International Journal of Project Management, 35, 557–570.

Kwak, Y.H., Anbari, F.T., 2009. Analyzing project management research: Perspectives from top management journals. International Journal of Project Management, 27(5), 435–446.

Laine, P.-M., Vaara, E., 2007. Struggling over subjectivity: A discursive analysis of strategic development in an engineering group. Human Relations, 60(1), 29–58.

Lalonde, P.L., Bourgault, M., 2013. Project, project theories and project research: A new understanding of theory, practice, and education for project management, in Drouin, N., Muller, R., Sankaran, S. (Eds.), Novel Approaches to Organizational Project Management: Translational and Transformational. CBS Press, Copenhagen, pp. 430–451.

Lalonde, P.L., Bourgault, M., Findeli, A., 2010. Building pragmatist theories of PM practice: Theorizing the act of project management. Project Management Journal, 41(5), 21–36.

Lalonde, P.L., Bourgault, M., Findeli, A., 2012. An empirical investigation of the project situation: PM practice as an inquiry process. International Journal of Project Management, 30(4), 418–431.

Larson, E., 2004. Project management structures, in Morris, P.W., Pinto, J.K. (Eds.), The Wiley Guide to Managing Projects. John Wiley & Sons, Hoboken, New Jersey, pp. 48–66.

Law, J., Urry, J., 2004. Enacting the social. Economy and Society, 33(3), 390–410.

Lechler, T.G., Thomas, J.L., 2015. Examining new product development project termination decision quality at the portfolio level: Consequences of dysfunctional executive advocacy. International Journal of Project Management, 33(7), 1452–1463. doi: https://doi.org/10.1016/j.ijproman.2015.04.001

Lee-Kelley, L., Blackman, D., 2012. Project training evaluation: Reshaping boundary objects and assumptions. International Journal of Project Management, 30(1), 73–82. doi: http://dx.doi.org/10.1016/j.ijproman.2011.02.010

Lee, L., Reinicke, B., Sarkar, R., & Anderson, R. (2015). Learning Through Interactions: Improving Project Management Through Communities of Practice. [Article]. *Project Management Journal*, *46*(1), 40-52. doi: 10.1002/pmj.21473

Leonardi, P. M. (2010). Digital materiality? How artifacts without matter, matter. [Materiality, affordances, software, organization]. First Monday. doi: 10.5210/fm.v15i6.3036

Lindgren, M., Packendorff, J., 2009. Project leadership revisited: Towards distributed leadership perspectives in project research. International Journal of Project Organization and Management, 1(3), 285–308.

Loch, C., 2000. Tailoring product development to strategy: Case of a European technology manufacturer. European Management Journal, 18(3), 246–258.

Mantere, S., 2005. Strategic practices as enablers and disablers of championing activity, Strategic Organization, 3(2), 157–284.

Mantere, S., 2013. What is organizational strategy? A language−based view. Journal of Management Studies, 50(8), 1408–1426.

Mantere, S., Vaara, E., 2008. On the problem of participation in strategy: A critical discursive perspective. Organization Science, 19(2), 341–358.

Martinsuo, M., 2013. Project portfolio management in practice and in context. International Journal of Project Management, 31(6), 794–803. doi: http://dx.doi.org/10.1016/j.ijproman.2012.10.013

Martinsuo, M., Korhonen, T., Laine, T., 2014. Identifying, framing and managing uncertainties in project portfolios. International Journal of Project Management, 32(5), 732–746. doi: http://dx.doi.org/10.1016/j.ijproman.2014.01.014

Mikkola, J.H., 2001. Portfolio management of R&D projects: Implications for innovation management. Technovation, 21(7), 423–435.

Mirabeau, L., Maguire, S., 2014. From autonomous strategic behavior to emergent strategy. Strategic Management Journal, 35(8), 1202–1229.

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

Mosavi, A., 2014. Exploring the roles of portfolio steering committees in project portfolio governance. International Journal of Project Management, 32(3), 388–399. doi: http://dx.doi.org/10.1016/j.ijproman.2013.07.004

Muller, R., Sankaran, S., Drouin, N., Nikolova, N., Vagaasaar, A.L., 2015. The socio-cognitive space for linking horizontal and vertical leadership, APROS/EGOS 2015 Conference, Sydney, December.

Naar, L. and Clegg, S., 2016. Models as Strategic Actants in Innovative Architecture. Journal of Management Inquiry, 1056492616682619; DOI version; print will be 2018.

Nicolini, D., 2012. Practice Theory, Work, and Organization: An Introduction. Oxford University Press, Oxford.

Nordqvist, M., Melin, L., 2008. Strategic planning champions: Social craftspersons, artful interpreters and known strangers. Long Range Planning, 41(3), 326–344.

O'Leary and Williams, 2013 T. O'Leary, T. Williams Managing the social trajectory: a practice perspective on project management IEEE Trans. Eng. Manag., 60 (2013), pp. 566-580

Olofsdotter, G., & Randevåg, L. (2016). Doing masculinities in construction project management: “We understand each other, but she…”. Gender in Management: An International Journal, 31(2), 134-153.

Olsson, R., 2008. Risk management in a multi-project environment: An approach to manage portfolio risks. International Journal of Quality & Reliability Management, 25(1), 60–71.

Orlikowski, W., 2015. Practice in research: phenomenon, perspective and philosophy, in Golsorkhi, D., Rouleau, L., Seidl, D., and Vaara, E. (Eds)., Cambridge Handbook of Strategy as Practice (2nd edition), Cambridge University Press, Cambridge.

Petit, Y., 2012. Project portfolios in dynamic environments: Organizing for uncertainty. International Journal of Project Management, 30(5), 539–553. doi: 10.1016/j.ijproman.2011.11.007

Pitsis, T., Clegg, S.R., Marosszeky, M., Rura-Polley, T., 2003. Constructing the olympic dream: Managing innovation through the future perfect. Organization Science, 14(5), 574–590.

Poskela, J., Dietrich, P., Berg, P., Artto, K.A., Lehtonen, T., 2005. Integration of strategic level and operative level front-end innovation activities. Paper presented at the Portland International Conference on Management of Engineering and Technology, 31 July – 4 August, Portland, Oregon.

Rank, J., Unger, B. N., & Gemünden, H. G. (2015). Preparedness for the future in project portfolio management: The roles of proactiveness, riskiness and willingness to cannibalize. International Journal of Project Management, 33(8), 1730-1743.

Regnér, P., 2008. Strategy-as-practice and dynamic capabilities: Steps towards a dynamic view of strategy. Human Relations, 61(4), 565–588. doi: 10.1177/0018726708091020

Rolfe, B., Segal, S., & Cicmil, S. (2017). The wisdom of conversations: Existential Hermeneutic Phenomenology (EHP) for project managers. *International Journal of Project Management, 35*(5), 739-748. doi: https://doi.org/10.1016/j.ijproman.2017.03.002

Samra-Fredericks, D., 2003. Strategizing as lived experience and strategists' everyday efforts to shape strategic direction. Journal of Management Studies, 40(1), 141–174.

Samra-Fredericks, D., 2005. Strategic practice, 'discourse' and the everyday interactional constitution of 'power effects'. Organization, 12(6), 803–841.

Sauer, C., Reich, B.Z. (2009). Rethinking IT project management: Evidence of a new mindset and its implications. International Journal of Project Management, 27(2), 182–193.

Schatzki, T.R. 2001. Introduction: Practice theory, in Schatzki, T., Cetina, K.K., & von Savigny, E. (Eds.), The Practice Turn in Contemporary Theory. Routledge, London, pp. 1-14.

Schatzki, T.R., 2002. The site of the social: A philosophical account of the constitution of social life and change. Pennsylvania State University Press, University Park, PA.

Seidl, D., 2007. General strategy concepts and the ecology of strategy discourses: A systemic-discursive perspective. Organization Studies, 28(2), 197–218.

Smets, M., Greenwood, R., Lounsbury, M., 2015. An institutional perspective on strategy as practice, in: Golsorkhi, D., Rouleau, L., Seidl, D., Vaara, E. (Eds.), Cambridge Handbook of Strategy as Practice, second ed. Cambridge: Cambridge University Press, pp. 283–300.

Smith, A.D., Ashmos Plowman, D., Duchon, D., 2010. Everyday sensegiving: a closer look at successful plant managers. Journal of Applied Behavioral Science 46 (2), 220–244.

Spee, A.P., Jarzabkowski, P., 2009. Strategy tools as boundary objects. Strategic Organization, 7(2), 223–232.

Star, S. L., & Griesemer, J. R. (1989). Institutional ecology, translations, and boundary objects: Amateurs and professionals in Berkeley's Museum of Vertebrate Zoology, 1907-39. Social studies of science, 19(3), 387-420.).

Stingl, V., Geraldi, J., 2017. Errors, lies and misunderstandings: Systematic review on behavioural decision making in projects. International Journal of Project Management, 35(2), 121–135. doi: http://dx.doi.org/10.1016/j.ijproman.2016.10.009

Styre, A. (2017). Thinking about materiality: the value of a construction management and engineering view. Construction Management and Economics, 35(1-2), 35-44.

Svejvig, P., Andersen, P., 2015. Rethinking project management: A structured literature review with a critical look at the brave new world. International Journal of Project Management, 33(2), 278–290. doi: https://doi.org/10.1016/j.ijproman.2014.06.004

Teece, D.J., 2007. Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. Strategic Management Journal, 28(13), 1319–1350. doi: 10.1002/smj.640

Teece, D.J., Pisano, G., Shuen, A., 1997. Dynamic capabilities and strategic management. Strategic Management Journal, 18(7), 509–533.

Terlizzi, M.A., Albertin, A.L., de Moraes, H.R.d.O.C., 2017. IT benefits management in financial institutions: Practices and barriers. International Journal of Project Management, 35(5), 763–782. doi: https://doi.org/10.1016/j.ijproman.2017.03.006

Thiry, M., Deguire, M., 2007. Recent developments in project-based organizations. International Journal of Project Management, 25(7), 649–658. doi: 10.1016/j.ijproman.2007.02.001

Thomas, J. L., & Buckle-Henning, P. (2007). Dancing in the white spaces: Exploring gendered assumptions in successful project managers' discourse about their work. International Journal of Project Management, 25(6), 552-559.

Thomas, L., Ambrosini, V., 2015. Materializing strategy: The role of comprehensiveness and management controls in strategy formation in volatile environments. British Journal of Management, 26, S105–S124. doi: 10.1111/1467-8551.12075

Thornton, P H., Ocasio, W., Lounsbury, M., 2012. The Institutional Logics Perspective: A New Approach to Culture, Structure and Process. Oxford University Press, Oxford.

Thornton, P.H., 2004. Markets from Culture: Institutional Logics and Organizational Decisions in Higher Educational Publishing. Stanford University Press, Stanford, CA.

Too, E. G., & Weaver, P. (2014). The management of project management: A conceptual framework for project governance. *International Journal of Project Management, 32*(8), 1382-1394. doi: http://dx.doi.org/10.1016/j.ijproman.2013.07.006

Tracey, P., Phillips, N., Jarvis, O., 2011. Bridging institutional entrepreneurship and the creation of new organizational forms: A multilevel model. Organization Science, 22(1), 60–80.

Tsoukas, H., 1998. The word and the world: a critique of representationalism in management research. International Journal of Public Administration, 21(5), 781–817.

Turner, J.R., Keegan, A., 1999. The versatile project-based organization: Governance and operational control. European Management Journal, 17(3), 296–309. doi: 10.1016/S0263-2373(99)00009-2

Turner, S., 1994. The Social Theory of Practices. Tradition, Tacit Knowledge, and Presuppositions. The University of Chicago Press, Chicago.

Unger, B.N., Gemünden, H.G., Aubry, M., 2012. The three roles of a project portfolio management office: Their impact on portfolio management execution and success. International Journal of Project Management, 30(5), 608–620. doi: 10.1016/j.ijproman.2012.01.015

Unger, B.N., Rank, J., Gemünden, H.G., 2014. Corporate innovation culture and dimensions of project portfolio success: The moderating role of national culture. Project Management Journal, 45(6), 38–57. doi: 10.1002/pmj.21458

Urhahn, C., Spieth, P., 2013. Governing portfolio management for innovative new product portfolios: a conceptual framework. International Journal of Product Development, 18(5), 377–394. doi: 10.1504/IJPD.2013.058448

Vaara, E., Tienari, J., Piekkari, R., Santti, R., 2005. Language and the circuits of power in a merging multinational corporation. Journal of Management Studies, 42(3): 595–623.

van der Heijden, K., 2005. Scenarios: The Art of Strategic Conversation, second ed. Wiley, Chichester.

Whittington, R., 2003. The work of strategizing and organizing: For a practice perspective. Strategic Organization, 1(1), 119–127.

Williams, T., Klakegg, O. J., Magnussen, O. M., & Glasspool, H. (2010). An investigation of governance frameworks for public projects in Norway and the UK. *International Journal of Project Management*, *28*(1), 40-50. doi:http://dx.doi.org/10.1016/j.ijproman.2009.04.001

Wright, R., Paroutis, S., Blettner, D., 2013. How useful are the strategic tools we teach in business schools? Journal of Management Studies, 50(1), 92–125.

Wynn, C., Smith, L., Killen, C.P., 2016. Cues: How power influences behaviour in project portfolio management. Paper presented at the Australian and New Zealand Academy of Management (ANZAM), Brisbane.

Yoo, Y., Richard J. Boland, J., Lyytinen, K., & Majchrzak, A. (2012). Organizing for Innovation in the Digitized World. Organization Science, 23(5), 1398-1408. doi: 10.1287/orsc.1120.0771

Zietsma, C., Lawrence, T.B., 2010. Institutional work in the transformation of an organizational field: The interplay of boundary work and practice work. Administrative Science Quarterly, 55(2), 189–221.