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The rigor-relevance gap in Project Management research:

It's time to stop the lament and think and act reflexively

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Abstract

Over the last decades, the "rigor-relevance gap" has garnered attention in Project Management

(PM) research. In this paper, we argue that reflexivity can help produce more relevant and rigorous

research and we invite scholars to stop sitting on the sidelines only to lament such a gap. In our

clarion call to overcoming the gap, we challenge scholars to take an active and competent part. To

that end, we outline typical reflexive questions along with four main pillars that scholars ought to

take into account: 1) the status of the PM knowledge field; 2) the evolution of PM through

historical periods of thoughts; 3) PM and social theory; and 4) ontological and epistemological

assumptions. We also showcase the dialectical interplay not only between sociology and PM but

also among these interdependent pillars. Finally, we conclude that such an interplay offers the

best opportunity to overcome the rigor-relevance gap in PM.

Keywords: Epistemology, Ontology, Project Management Research, Social Theory, Relevance,

Rigor, Reflexivity.

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#### Introduction

Management research seems to fail to impact on what practitioners do and they often bemoan that in the business press. Management scholars also voice their concerns in the business press. In a *Business Week* article published in 2008, Hambrick, a past president of the *Academy of Management Journal*, laments a "contorted, misshapen, inelegant" format of academic articles. At a time when Management research has the wind in its sails (as more journal articles than ever are being published after a rather intense competition) and despite the good and rigorous research being thus produced, there is a broadly shared sense, among scholars, of a lack of high-impact research. We are now, perhaps, on the cusp of a relevance crisis in Management research (Mats Alvesson & Sandberg, 2013b; Bennis & O'Toole, 2005; Ghoshal, 2005).

Since the major overhaul in the 1950s in response to the strong criticism of the Ford and Carnegie Foundations, the pendulum has swung from relevance to rigor; some even suggest that it has swung too far (Dostaler & Tomberlin, 2013; Gulati, 2007; Khurana, 2007). Over the last twenty years, although not new, the so-called "rigor-relevance gap" (relevance or researcher-practitioner gap) has become a topical scholarly debate and the spotlight of many presidential addresses, forums, points and counterpoints in the academy (Mats Alvesson & Sandberg, 2013b; Bennis & O'Toole, 2005; Donaldson, Qiu, & L., 2013; Gulati, 2007; Hodgkinson & Rousseau, 2009; Kieser & Leiner, 2009; Shapiro, Kirkman, & Courtney, 2007).

Despite these efforts, the rigor-relevance debate remains a long-standing dichotomy, an "either/or" argument between two opposites, rigor and relevance: "To gain more of one, we must lose some of the other, in an ongoing zero-sum game" (Gulati, 2007, p. 777). Such "unreflexive" upholding

of dichotomy, we argue, although helpful for making sense, rarely leads to interesting and influential theories, and it may actually act as a thought-stopper (Gulati, 2007; Nubiola, 2008). As a consequence, there is a pressing need to problematize the rigor-relevance dichotomy. Given the shortage of high-impact research, many leaders in the field challenge researchers to accept rigor-relevance as a false dichotomy, and thus to move away from "the tyranny of the OR" to the "genius of the AND" (Mats Alvesson & Sandberg, 2013b; Gulati, 2007; Hodgkinson & Rousseau, 2009; Van De Ven & Johnson, 2006; Vermeulen, 2007).

While there is no silver bullet to craft interesting research, we note that bridging the gap would not be possible without researchers "thinking about their own thinking", and thus, becoming reflective practitioners of research (Schön, 1991) and even *reflexive* researchers. In the past 20 years then, Management researchers have been encouraged to take a "reflexive turn" (Weick, 1999), to question what they themselves take for granted while doing research and to be suspicious of the relationships between researchers, the object of their research, and practitioners (Cunliffe, 2003; Phil Johnson & Duberley, 2003). In line with "this new spirit of reflexivity" (P. Johnson & Duberley, 2000), we have seen "reflexivities" rather than reflexivity (M. Alvesson, Hardy, & Harley, 2008), and in a sense, researchers have tried to be "more reflexive of what reflexivity means" (Phil Johnson & Duberley, 2003, p. 1294).

But what we know hinges on what we believe in, and we cannot detach our reflexivity, a "fundamental dimension of epistemology" (P. Bourdieu & Wacquant, 1992, p. 68), from our own ontological and epistemological commitments (P. Johnson & Duberley, 2000). Moreover, how we come to know what we know comes from the way we experience it. Therefore, since reflexivity

challenges us to turn our research back upon itself by taking account of it and questioning how we present truth claims and how we construct meaning, we have to be aware of the interplay between history, society, ontology, epistemology, theory, methodology and methods (M. Alvesson et al., 2008; Mats Alvesson & Sandberg, 2013a, 2013b; Burrell & Morgan, 1979; Cannella & Paetzold, 1994; Daft & Lewin, 1993; Déry, 2009; Pfeffer, 1993; Whitley, 1984a, 1984b; Wren & Bedeian, 2009). Given such emphasis on reflexivity, we contend that it is not an end in itself, but a means to produce both relevant *and* rigorous research (M. Alvesson et al., 2008; Weick, 1999).

Over the last two decades then, these 3R-challenges (relevance, rigor, reflexivity) have been an often-debated topic in Management research. Perhaps, after 50 years of research and the dismal performance of the projects, these 3R-challenges are particularly pressing and insightful in the young, relatively immature and pluralistic field of Project Management (PM) as it navigates at the crossroads between specialization and fragmentation (Anagnostopoulos, 2004; Avots, 1969; Boutinet, 2005, 2006; Bredillet, 2010; Cicmil & Hodgson, 2006; Engwall, 2003; Gauthier & Ika, 2012; Damian Hodgson & Cicmil, 2006; Morris, 2013a, 2013b; Packendorff, 1995; Shenhar & Dvir, 2007a; Smyth & Morris, 2007; Söderlund, 2011; Söderlund & Maylor, 2012; R. J. Turner, Huemann, Anbari, & Bredillet, 2010; Winter, Smith, Morris, & Cicmil, 2006; Winter & Szczepanek, 2009).

As these scholars clearly demonstrate, spurred by the phenomenon of the "projectification" of a firm and even of society, coined "the profession of the 21<sup>st</sup> century", seen as the wave of the future and as a global management philosophy for dealing with change and innovation in organizations, PM has become a rapidly expanding subfield of Management and Organization Studies with a

particular positioning and exchange with related disciplines (Gauthier & Ika, 2012; Kwak & Anbari, 2009; Morris, 2013a, 2013b; Peters, 2004; Shenhar & Dvir, 2007a; Söderlund, 2011).

Yet paradoxically, in spite of the huge increase in article publication in PM and in top tier-Management journals, the inclusion of the established project journals in the Social Science Citation Index, the ever-increasing number of bodies of knowledge and their periodic updates, and the efforts to disseminate this knowledge in practitioners' circles, "...much of project management research is mired in the middle, neither sufficiently rigorous for the academy nor sufficiently insightful for practitioners" (Reich et al., 2013, p. 1). Perhaps, there is no other subfield of Management where the tensions between the "logic of impact" and "the logic of the academy", i.e. between relevance and rigor, are intense (Söderlund & Maylor, 2012; Winter et al., 2006).

But, if the importance of making sense of PM research (Söderlund, 2011; R. J. Turner et al., 2010), the "project-as-practice" movement (Blomquist, Hällgren, Nilsson, & Söderholm, 2010), the construction of good research questions (Hällgren, 2012), the lack of methodological rigor (Morris, 2013a, 2013b; Smyth & Morris, 2007) and the opportunity to develop good, interesting and influential knowledge about the "stuff of PM" (Shenhar & Dvir, 2007a; Söderlund & Maylor, 2012) are vivid demonstrations of the rigor-relevance debate in the PM field, then there has been little attention given to reflexivity in the PM field. Hence our focus on this specific research question: What do we need to be aware of if we aim to carry out a reflexive, relevant and rigorous (3R) research in PM?

To that end, inspired by the gap and reflexivity debates and the closely related epistemological debate in Management research (Mats Alvesson & Sköldberg, 2009; Burrell & Morgan, 1979; Gioia & Pitre, 1990; Özbilgin & Tatli, 2005), we propose four pillars for a reflexive, relevant and rigorous PM research. We believe they will help project scholars in being aware of the debate over the status of their knowledge field (pillar 1), grasping the idea that PM has grown from a premodern, through a modern, postmodern, and then hypermodern understanding of projects and their management (pillar 2), recognizing that social theory has a considerable influence on PM research and that the emphasis shifts from rigor to relevance or vice versa, from one specific understanding of PM to the other (pillar 3), and in making explicit their own ontological and epistemological positions (pillar 4). While a fifth pillar might refer to research methodology, it is our view that ontology and epistemology, i.e. pillar 1, influence much of our choice for research methods (e.g., Grix, 2002; Morgan & Smircich, 1980). As we will show, far from operating separately, these four pillars are dialectically related, so that reflexivity occurs at their interfaces and would help scholars actively, competently, individually and collectively overcome the rigorrelevance gap in PM research.

## On the rigor-relevance gap in Project Management research

Project Management (PM) shares with Management the concern that what is knowledge for researchers is not necessarily knowledge for practitioners (Kieser & Leiner, 2009). This epistemological concern may cause a "lost before translation" gap (irrelevant but rigorous research), a "lost in translation" gap (failure to reach practitioners) (Shapiro et al., 2007) or a more

subtle divide between relevant and useful knowledge (useful in terms of holistic answers to a problem practitioners have) (Markides, 2011).

Yet, despite such common grounds, while relevance appears, by most accounts, as the unmet challenge of Management research (Hodgkinson & Rousseau, 2009) (Hodgkinson and Rousseau, 2009), PM researchers and practitioners often get together to produce highly *relevant* research (Söderlund & Maylor, 2012, p. 687 and 693). As these authors point out, there are interesting collaborations/partnerships between the so-called "Project Universities" and multinational companies such as the BP-MIT collaboration, and others including HP, Statoil, Shell and Rolls Royce. Sure, there has been some complaints over the relevance of PM research and there is still much to do in the "Age of Relevance" where PM should contribute to organizational, societal and global challenges (Morris, 2013a, 2013b). "The conceptual base of project management continues to attract criticism for its lack of relevance to practice" (Winter et al., 2006, p. 638).

Furthermore, while Management seems to produce more rigorous research, rigor appears as the unmet challenge of PM research. Many authors lament the lack of depth of the PM literature, as many papers fail to acknowledge that they are "standing on the shoulders of giants" (Morris, 2010, p. 143). PM scholars also bemoan the methodological weaknesses of PM research. For example, a review of a sample of 68 papers published in 2005 in the *International Journal of Project Management* found that 90% of authors did not make their methodology explicit: "There is a lack of epistemological care taken in the selection and application of research methodologies" (Smyth & Morris, 2007, p. 433). PM research claims are not always empirically grounded in valid data (Morris, 2013b). At times, PM authors criticize the opacity of data and warn against a lack of

critique of both data and findings. Shenhar and Dvir (2007b)'s landmark book, *Reinventing Project Management*, is not an exception, according to Morris (2013a).

This lack of rigor is detrimental to many researchers who try to publish out of the realm of PM. Indeed, PM research is often regarded, by other Management scholars, in a rather condescending manner, as too applied and too close to practice to yield rigorous research. As such, not a single PM journal reaches A-level outside the field and only a very few "stars" end up with their names in print in the top tier-management journals (Hällgren, 2012; Kwak & Anbari, 2009). This pragmatic advice offered to a PM scholar by a senior and well respected academic resonates well with this indictment of rigor: "...if you want to get published, drop the term project management from the title or keywords...The area is too applied, too close to practice for a proper academic study" (Söderlund & Maylor, 2012, p. 687).

Thus, the epistemological debate has been very intense over the last decade in PM research while it has not attracted a lot of interest in Management research since the seminal paper on this issue published by (Pfeffer, 1993). Indeed, many PM scholars have singled out the lack of a solid theoretical and conceptual underpinning, and therefore the lack of rigor or sound methodologies. "Most authors herald the development of a solid and explicit theoretical basis for project management as the crucial and single most important issue for the project management profession" (Gauthier & Ika, 2012, p. 5). These shortcomings of the PM literature have been linked to a sort of pre-paradigmatic phase of the field (Bredillet, 2010) if one accepts the abusive usage of the (Kuhn, 1996)'s theory, which was developed in the context of natural sciences (Anagnostopoulos,

2004). As theory in PM and its discussion, if at all, are mostly implicit and rare, some have suggested that the underlying theory of PM is obsolete (Koskela & Howell, 2002).

Acknowledging these developments, many authors have, in the last two decades, answered the call for an assessment of what has actually been achieved by PM (project) research (e.g., Kwak & Anbari, 2009; Packendorff, 1995). Being aware of the ever present danger involved in every generalization, normative and descriptive theories have been proposed (Anagnostopoulos, 2004) which mirror the hard and soft "paradigms" of PM (Pollack, 2007) and the divide between two competing PM intellectual roots: engineering science and applied mathematics for the former and social sciences for the latter. The normative theory has been hailed as a rationalist and instrumental theory of PM, and the descriptive theories as being eclectic, contingent or middle-range theories (see the Scandinavian school of PM: Engwall, 2003; Packendorff, 1995; R. J. Turner et al., 2010). More recently, Critical Management has been suggested as a new possibility for PM theory (Cicmil & Hodgson, 2006; Damian Hodgson & Cicmil, 2006) and the idea of a postmodern theory of PM has been put forth (Boutinet, 2006). This is why some observers worry that the pendulum has swung too far from what matters to PM practice (relevance) too much interest in projects as organizational phenomena (rigor) (Morris, 2010, 2013a, 2013b).

A unified theory of PM is probably heretical and illusory (Reich et al., 2013; Shenhar & Dvir, 2007a). For PM is, like Management, a "fragmented adhocracy" (Whitley, 2000) and PM research is characterized by diversity, plurality, specialization and fragmentation (e.g., Söderlund, 2011). In light of this epistemological debate over PM research, it has been suggested to rethink PM (Winter et al., 2006), to reclaim PM (Blomquist et al., 2010), to reinvent PM (Shenhar & Dvir,

2007b) or to reconstruct PM (Morris, 2013a, 2013b) in order to enhance both relevance and rigor in PM research.

It is against this background that we think we have to turn to reflexivity in PM research and the four pillars we propose to address the rigor-relevance issue in PM research. In the following sections, we wish to address this question: what does a researcher need to be aware of if he or she aims at carrying out a reflexive, relevant and rigorous project research? Thus, we hope to open the way for a 3R (relevance, rigor, reflexivity)-debate in PM.

## Four underpinning pillars for crafting a reflexive, relevant and rigorous project research

Our working assumption is that, to become a reflexive researcher, we ideally ought to understand questions like what is the nature of reality, what is knowledge, what is our purpose as researchers, how our practice as researchers matters, and the interplay among ontology, epistemology, social theory, PM history, history of the social world, and the "scientific" status of the field of PM itself. This assumption rests on the shoulders of giants.

First and foremost, we are sympathetic to Whitley (1984a, 1984b)'s work on the conditions and scientific status of the field of Management. Building on the works of (P. Bourdieu, 1975, 2004), and especially by (Bredillet, 2010), we suggest PM as a Knowledge Field as the first pillar. Indeed, the rigor-relevance debate rests on the assumption of PM as a field (Bredillet, 2010; Morris, 2013a).

Second, we favor the powerful idea that Management has a societal underpinning and that to understand its history, one should understand human civilization and history (Déry, 2009; Wren & Bedeian, 2009). More specifically, we borrow the idea from Boutinet (2005), Kozak-Holland (2011) and, in particular, Gauthier and Ika (2012) that PM has grown from different perspectives grounded in successive periods in the history of the social world: premodernity, modernity, postmodernity, and hypermodernity. Echoing this view, we submit PM Evolution through Historical Periods of Thoughts as the second pillar. Indeed, as we will learn, the emphasis shifts on rigor or relevance according to the period considered (Gauthier & Ika, 2012).

Third, we owe Burrell and Morgan (1979) for the idea that our quest for project-based theories and, in particular, our thinking about projects and project organizations is deeply influenced by social theories. While we get the call of Reich et al. (2013) that PM researchers should adopt and adapt organizational theories in their work, we take one step back and beg them to first learn to recognize social theories as they pertain to their work. Hence, we propose Thinking the Project, Project Management and Social Theory as the third pillar. Indeed, if one concurs with Van de Ven (1989, p. 486) that "Nothing is quite so practical as a good theory", then in one's view the rigor-relevance gap is a matter of good theory (se for example, Koskela & Howell, 2002 about PM).

Fourth and lastly, we are greatly indebted to Burrell and Morgan (1979) and Morgan and Smircich (1980) who warned us against "implicit and largely untested ground assumptions" about ontology (what is out there to know) and epistemology (how can we know about it). They taught us how these root assumptions impact the way we create (e.g., the research methods that we use) and view knowledge (e.g., what is "true" or "false") and above all, social theory. Therefore, in order to

understand and recognize other researchers' positions and defend our own, we need to be aware at least of what P. Johnson and Duberley (2000) termed our "epistemological commitments" and (Cunliffe, 2003) called our "intellectual suppositions". Thus, building on the works by Daft and Lewin (1993), Pfeffer (1993) and, Cannella and Paetzold (1994) in Management and those of Smyth and Morris (2007) and Bredillet (2010) in PM, we suggest Ontology and Epistemology as the fourth and last pillar. Indeed, here the rigor-relevance gap becomes an epistemological and ontological question on the tensions between a theoretical knowledge and a practical knowledge (Bredillet, 2010; Lalonde, Bourgault, & Findeli, 2010).

Overall, the impact of sociology in PM literature, much like in Management (e.g., Burrell & Morgan, 1979), is undisputed. For example, oftentimes PM authors view the project from an organizational theory's perspective (e.g., Reich et al., 2013), conceptualizing it as a temporary organization (e.g., Tuner & Müller, 2003) or as a praxis (e.g., Blomquist et al., 2010). Thus, we posit that there is a horizontal dialectic between PM and sociology and another dialectic, this one vertical, among the four pillars which, as we will demonstrate, share a sheer concern for the rigor-relevance challenge, some more than others. And we invite researchers to stop sitting on the sidelines only to lament the rigor-relevance gap within one pillar as is often the case and, instead, fully embrace altogether the four interdependent pillars to individually and collectively be aware of the gap and contribute actively and competently to overcoming it. Figure 1 summarizes the above four pillars, which we hope reflexivity from each and every single one of the PM researchers can help relate to each other. It depicts the horizontal dialectic between PM and sociology, the vertical dialectical relationships that exist amongst the pillars, and outlines typical reflexive questions to focus on in order to overcome the rigor-relevance gap in PM research.

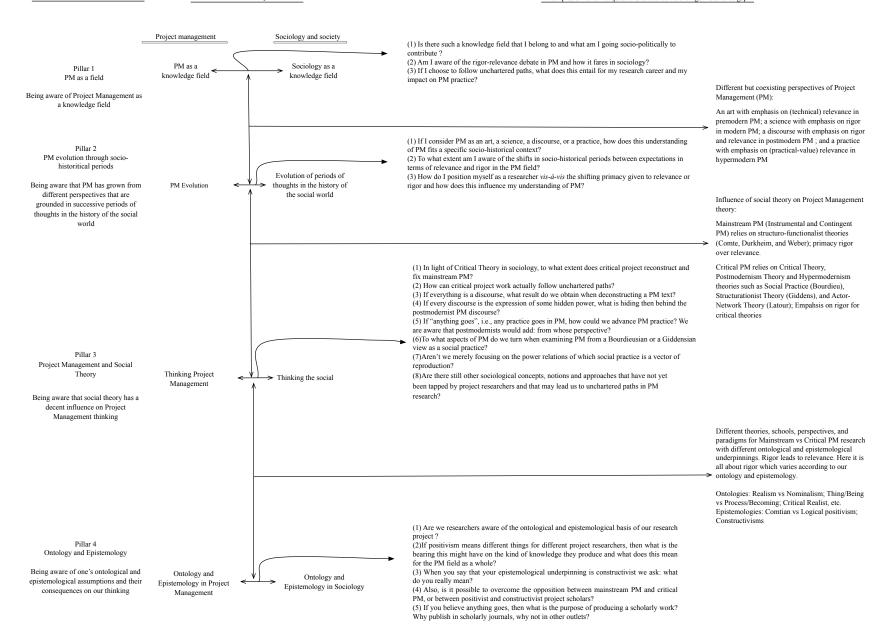


Figure 1. Different levels of analysis and examples of reflexive questions to overcome the rigor-relevance

# Pillar 1: Being aware of Project Management as a knowledge field

There has been a long-standing debate over whether or not PM is a science, an art, a discipline, a field of knowledge, a profession, an amalgam of many other disparate disciplines or simply a practice (Morris, 2013a, pp. 231-232). At the heart of such a disagreement are the differing views on the status, scope, content, means and ends of PM, and the rigor-relevance issue. In a nutshell, many proffer that PM is merely the management of project *execution* as typified by the Project Management Body of Knowledge (PMBOK). Others, like Morris (2013a, 2013b), reject this view and instead promote PM as the management of projects. Still others view projects from the organizational theory's perspective (e.g., Reich et al., 2013). A notable example is viewing projects as temporary organizations (e.g., Packendorff, 1995).

Notwithstanding such a disagreement about the field, we can note that PM is growing in depth but also in breath as we can link the management of projects with what some term "the allied disciplines": strategy, operations management, organizational behavior, IT, etc. (Kwak & Anbari, 2009). That says a lot about the scope and content of the field as well as about the challenge it poses for project professionals.

Is it reasonable to expect a professional in the field to master the whole domain? Is it too large for project management professionals to constantly reflect, as Donald Schön proposed, on how their practical experience shapes and modifies the discipline's central 'body of knowledge'? (Morris, 2013a, p. 232).

While our intent here is not to cover all the views about the PM field, we direct researchers to this crucial question: Is there such a discipline as PM? Many would say yes and would back their

answer up (Bredillet, 2010; Gauthier & Ika, 2012; Morris, 2013a, 2013b). Take the definition of a knowledge field put forth by Bourdieu:

(...) system of objective relations between positions already won (in previous struggles), the scientific field is the locus of a competitive struggle, in which the specific issue at stake is the monopoly of scientific authority, defined inseparably as technical capacity and social power, or, to put it another way, the monopoly of scientific competence, in the sense of a particular agent's socially recognised capacity to speak and act legitimately (i.e. in an authorised and authoritative way) in scientific matters (P. Bourdieu, 1975, p. 19).

From the above discussion, there is no doubt, if one takes a bourdieusian view, that PM is a true knowledge field within its own rights, with its language, associations, specialists, periodicals, professional and research conferences and its claim to a particular scientific status. Scholars should know what is going on in the field and, in particular, they should get acquainted with the debate about the status, scope, content, means and ends of PM, and the rigor-relevance challenge (Bredillet, 2010; Morris, 2013a, 2013b). The following reflexivity questions along the dialectical relationships between sociology and PM (see Figure 1) might help them come up with a stance that will contribute to overcoming the rigor-relevance gap:

- 1) Is there such a knowledge field that I belong to and what am I doing socio-politically to contribute?
- 2) Am I aware of the rigor-relevance debate in PM and how it fares in sociology?
- 3) If I choose to follow unchartered paths, what does this entail for my research career and my impact on PM practice?

At the risk of being paralyzed by too much analysis, making one's stance clear i.e., making the implicit explicit is useful, from a researcher's standpoint, as it may shed light on the career risks one takes by positioning oneself about the status, scope, content, power relations, means and ends of PM (Mats Alvesson & Sandberg, 2013a, p. 44). Thus, Mats Alvesson and Sandberg (2013a, p. 52) invite the researcher to weigh in the following question: "(...) What historical and practical conditions have given birth to the subject matter and how have those conditions given birth to it?" This is why we turn to PM Evolution through Historical Periods of Thoughts as the next pillar.

## Pillar 2: Project Management evolution through historical periods of thoughts

Our understanding of PM has not been the same over the decades. Indeed, not only projects, especially landmark projects, and PM play a key role in the evolution of society, but they are also social constructs. "Undoubtedly the projects were executed with very different mindsets, by different cultures, and different belief systems" (Kozak-Holland, 2011, p. 32). Consequently, many project scholars have attempted to understand project (management) history (see for example, Kozak-Holland, 2011; Morris, 2013a, 2013b).

Table 1

The different understandings of Project Management through socio-historical periods

Underpinning social theories and the shifting emphasis on rigor or relevance –

Socio-historical periods	PM perspectives	Social theories	Rigor vs Relevance
	Instrumental PM	Earlier modern social theory (e.g. Comte ['Social Physics'],; Weber [Legitimated orders/Instrumental rationality] and Durkheim [Functionalism –	
Modernity	Contingent PM	mechanic and organic perspective]  Social theory in the mid-XX <sup>th</sup> Century (e.g. Parsons [Structural Functionalism]; Merton ['Structural'Dysfunctionalism])	Emphasis on rigor
		Critical Theory (e.g., Marx [Maxism], Habermas [Modernity as Unfinished Project/Communicative Rationality])	
PS/PM	MPC	Poststructuralism (e.g. Foucault [Power and Knowledge]) Postmodernism (e.g., Derrida [Deconstruction])	Rigor or relevance: anything goes
Hypermodernity		Actor Network theory (e.g. Latour) Structurationist theory/Late modernity (e.g. Giddens)	Emphasis on (practical value) relevance

What follows draws from the premodern, modern, postmodern and hypermodern historical account of (Gauthier & Ika, 2012).

#### Premodern PM

We still have so much to learn from the landmark projects in our past, but we have to extend this quest for knowledge to long before modern PM and its genesis in the 1940s. These projects include the Tower of Babel and the Great Pyramids of Egypt (circa 2700 to 2500 BC). While most of these projects were implemented to stimulate the economy, they shared a key premodern feature: they were art/craft and they served the glory of a god (or his representative like Pharaoh, a King or a Pope) or a religion (Kozak-Holland, 2011). In premodernity then, we would define PM as an activity, an art/craft that follows the laws of gods.

#### Modern PM

Locked in the darkness of the temples, human beings would want more light, freedom, progress and happiness. This was only possible when they challenged religion, myth and tradition: the "project of modernity". That's exactly what they got with the Enlightenment philosophers who placed an unshakeable faith in reason, science or knowledge, and progress (Déry, 2009; Giddens, 1990; Habermas, 1997). As figures of modernity, projects should serve progress, produce reliable knowledge, shape the future of organizations for the better, and therefore control nature and society. PM would ensure such controllability. Hence, the scientific approach to PM with its underpinning assumptions such as instrumentality, rationality, universality, objectivity, value-free decision-making, and the possibility of generating law-like predictions in knowledge (Cicmil & Hodgson, 2006). We can consider the Manhattan Project (1942–1945), the Normandy Invasion (June 6th, 1944), and the Apollo program (1968–1972) as landmark modern projects.

#### Postmodern PM

However, the rapid disenchantment with such modern pillars as science, democracy and capitalism has generated a new era called postmodernity (Zygmunt Bauman, 1991, 2000; Taylor, 1991). Attempting to fix modernity the way Frankfurt School's proponents such as Habermas (1997) suggest is no longer enough. Because, in the view of postmodernists – here postmodernists and poststructuralists – reason and knowledge are only narratives and means of domination (Mats Alvesson & Deetz, 1996; Déry, 2009). For proponents of a postmodernist PM, projects are no more the fruit of instrumental rationality, and PM is seen as a rallying rhetoric for power play, domination, and control. The stakes are more eclectic and even narcissistic: every now and then, individuals try to meet their numerous short-term needs, pleasure, and aspirations. Thus, there is no good or bad forms of PM. A good example of a postmodern project is the Stephane Hessel project "Time for Outrage". Another one is "Occupy Wall Street". Both question and challenge such pillars of modernity as capitalism.

## Hypermodern PM

It is soon argued that postmodernity, despite its virulent criticism of modernity and its overarching instrumental rationality, has little to offer and falls short of eclipsing modernity. Thus, the advent of what we may call the "project of hypermodernity", the transformation of modernity, a sociotechnical New World that sees constant redefinition as a means of avoiding the pitfalls experienced by modernity. Some call it late modernity (Giddens, 1990); others risk modernity (Ulrich Beck, 1992); still others name it reflexive modernity (U. Beck, Giddens, & Lash, 1994) and many coin the term hypermodernity (Déry, 2009; Lypovetsky & Charles, 2005).

Hypermodernity does not favor reason, but reflexivity. It gives people a reflexive capacity, a kind of social competence which helps them understand the conditions in which they act, the (unexpected) consequences of what they do and how they do it (Giddens, 1984). Institutional reflexivity may also be called upon to deal with the unexpected impacts of social actions (Hoogenboom & Ossewaarde, 2005). Hypermodern PM would then be a reflexive practice. A good example of a hypermodern project is the 2011 Life in a Day Youtube Documentary Film Project. You may find other ones on Facebook, Twitter and Instagram. Below are a few reflexivity questions that we invite researchers to take on in order to contribute to overcoming the rigor-relevance gap:

- 1) If I consider PM as an art, a science, a discourse, or a practice, how does this understanding of PM fits a specific socio-historical context?
- 2) To what extent am I aware of the shifts in socio-historical periods between expectations in terms of relevance and rigor in the PM field?
- 3) How do I position myself as a researcher *vis-à-vis* the shifting primacy given to relevance or rigor and how does this influence my understanding of PM?

## Pillar 3: Project Management and social theory

As we have seen, PM has grown over the last 60 years or so from a largely premodern, to a modern, then postmodern, and finally hypermodern understanding. As shown by Gauthier and Ika (2012), the modern understanding of PM represents the tradition (mainstream PM) whereas the critical theorist, the postmodern and hypermodern understandings of PM represent the more recent critical PM (the "Making Projects Critical" movement). Indeed, critical PM questions and challenges the mainstream way of shaping the practice and theory of PM, and thus, focuses on:

who is included in and who is excluded from the decision-making process, analysing what determines the position, agendas and power of different participants, and how these different agendas are combined and resolved in the process by which decisions are arrived at (Damian Hodgson & Cicmil, 2006, p. 12).

In terms of the rigor-relevance debate, taking into account that mainstream PM is essentially modern, then, as mentioned in the previous pillar, research in this tradition gives primacy to scientific rigor over relevance. However, Critical PM favors rigor in its critical theorist tradition, relevance in ethical terms or value-rational knowledge (Know-How) in its hypermodernist research tradition, and rigor and/or technical relevance in its postmodernist tradition, as postmodernity is the return of premodernity with its focus on technical relevance (see Table 1 above). Both mainstream PM and critical PM, we will argue, are deeply influenced, albeit differently, by social theory: the way we think of a project reflects the way we think of society.

## Mainstream PM and social theory

Take mainstream PM. The first type of mainstream PM, which we might call "instrumental" PM, considers projects quintessentially as things with their own functions and structures. Here, efficiency and rationality prevail: project objectives equal project *management* objectives equal objectives of project stakeholders. Thus, a "management-as-planned" philosophy and a "planned" management style prevail in instrumental PM where a kind of scientific, mechanistic and reductionist management dominates (e.g., Ika and Bredillet, 2016).

In a second type of mainstream PM that we might term "contingent" PM, the power of context is recognized and one size does not fit all projects. Here, a "managing" philosophy along with an "emergent" PM style and a kind of holistic approach (the project is more than the sum of its parts) may be appealing (Engwall, 2003; Shenhar & Dvir, 2007b).

However, whether mainstream PM takes the form of instrumental PM or contingent PM, the success of a project still depends on the adaptation of its structures, functions and processes to its context (Ika & Bredillet, 2016; Lewis, Welsh, Gordon, & Green, 2002; Shenhar & Dvir, 2007b). Quite often then in mainstream PM, the project team may rely on a high degree of differentiation between the disciplinary roles of their members and tools such as the Work Breakdown Structure (WBS), which logically decomposes and subdivides a project work into small and manageable chunks. Since what has been broken down into parts must ultimately be put back together in a coherent whole to ensure integration, there is a need of formal coordination (Mintzberg, 2009). Logico-rational tools such as the matrix of responsibility are called upon with, most importantly, standards. Hence, the development of professional PM associations which aim at making PM a profession and therefore at standardizing its practice.

The above account of mainstream PM clearly exhibits the often implicit, rationalistic, and (structuro-) functionalist underpinning of mainstream PM practice and theory. Yet, this is not always made explicit. Overall, mainstream PM researchers rely on the social theory of Auguste Comte, Émile Durkheim and Max Weber.

First, to assume that, in instrumental PM, projects are quintessentially things that are in relationships with other things, to identify critical success factors in a quest for the "Holy Grail" or the one-best-way approach to getting projects done, is nothing but a Comtian way of looking at projects (see J. H. Turner, Beeghley, & Powers, 2012, p. 41).

Second, the focus of instrumental PM on efficiency, i.e., getting things done on time, within a budget, to specifications, and the ensuing technocratic, standardized, objective and impersonal style of PM speak a lot to the Weberian notions of instrumental rationality and legal type of legitimation of orders.

The first type of action is the *instrumentally rational*, which occurs when means and ends are systematically related to each other based on knowledge...The archetypal form of instrumentally rational action is based on objective, ideally scientific, knowledge. Action buttressed by objective knowledge is more likely to be effective (J. H. Turner et al., 2012, p. 207).

Third, the prescriptive, organicist, and functionalist nature of the *contingent* mainstream PM approach, the idea that the whole project is not equal to the sum of its parts (holism), the need for the project to adjust to its context, the interactions between its different parts, the functions or the needs which these parts serve for the better of the project as a whole, the degree of differentiation in terms of expertise, and the corollary need of integration and coordination, are reminiscent of a Durkheimian sociological theory (seeBaert & Silva, 2010, pp. 4-5).

# Critical Project Management and social theory

In contrast to mainstream PM, critical PM scholars position PM in a wider political and sociological perspective and highlight issues such as: "power and domination in project settings, ethics and moral responsibility within projects, tensions between standardisation and creativity in project organisations, the limits to projectification and the broader dysfunctions of project rationality" (Cicmil, Hodgson, Lindgren, & Packendorff, 2009, p. 86). To advance such critical work, they draw from Critical Theory and Critical Management Studies in general, and more specifically from a number of intellectual traditions or sources of theoretical inspiration that range from critical theorists, to postmodernists, and to hypermodernists (Gauthier & Ika, 2012; Sage, Dainty, & Brookes, 2010).

Critical PM scholars may follow the footsteps of the Franckfurt's school, which does not reject modernity but instead questions, challenges, and amends it. Espousing the Habermass's idea of "communicative rationality" (Baert & Silva, 2010), they openly criticize mainstream PM and argue that it does not live up to the challenges of the embodied and power-laden realities of the technicist and instrumentalist forms of rationality in project settings with their consequences on project workers in terms of job fragmentation, managerial control and surveillance (e.g., Damian Hodgson & Cicmil, 2006). Two reflexivity questions may deserve attention here if scholars are to contribute to overcoming the rigor-relevance gap:

- 1) In light of Critical Theory in sociology, to what extent does critical project work reconstruct and fix mainstream PM?
- 2) How can critical project work actually follow unchartered paths?

Some other critical project work emerges from a second strand that we might associate with the postmodern ideal-type of social thought: postructuralism and postmodernism. While Mumby and Putnam (1992) consider the first to be part of the second, Agger (1991) suggests both postructuralism and postmodernism are two separate yet fairly similar movements. Yet, not only are they cynical about the "project of modernity", but they also remain skeptical of the project undertaken by critical theorists to fix modernity, which, they think, ends up moving the power center: the dominated become dominators, and, thus, sharpen their discourse to seize their new power.

Quite often, many PM postmodernists turn to the deconstruction method to dissect PM standards (e.g., Sergi, 2010) in a true Derrida (1998) tradition. They also may draw attention to the power relations maintained by professional PM associations in a true Foucault (1972) tradition where power and knowledge are two sides of the same coin (e.g., Damien Hodgson, 2002; Damian Hodgson, 2005; Lindgren & Packendorff, 2006).

Therefore, if you are a PM postmodernist and willing to contribute to overcoming the rigorrelevance gap, we ask:

- 1) If everything is a discourse, what result do we obtain when deconstructing a PM text?
- 2) If every discourse is the expression of some hidden power, what is hiding then behind the postmodernist PM discourse?
- 3) If "anything goes", i.e., any practice goes in PM, how could we advance PM practice? We are aware that postmodernists would add: from whose perspective? But their view that this is, once

again, a power-laden question, falls short of proposing any alternative whatsoever for the reason crisis.

In light of the above, modernity emerges from its ashes in a more radical version which some christen the hypermodern ideal-type: an eclectic, theoretical and practical movement with no real overall consistency (Z. Bauman, 2011; Déry, 2009). Hypermodernity in PM consists in a plurality of different theoretical positions. The "project-as-practice" school, with its focus on project practitioners, on what they actually do in a given situation (the praxis) and on their practices, is one of the most influent (Blomquist et al., 2010).

First, the "project-as-practice" school draws upon Bourdieu and his theory of social practice (Pierre Bourdieu & Chartier, 2015; P. Bourdieu & Wacquant, 1992) and his concept of "habitus", or the dispositions tacitly acquired through early childhood which become the basis for people's practices, improvisations, attitudes and bodily movements and which give them some kind of "practical sense" to deal with the situations they face in a social context. Since habitus are acquired through early childhood and have structural components, then Bourdieu can be considered as a "genetic structuralist" (Baert & Silva, 2010).

Second, other critical project studies use the Giddensian structurationist theory to show that the project-as-practice is not in a unidirectional (as the *contingent* mainstream PM school proposes) but instead in a dialectical relationship with its environment: the project influences the environment, and *vice versa* (e.g., Manning, 2008; Sydow, 2006). Contrary to the Bourdieusian influence on PM as practice and his focus on power, the Giddensian view draws attention on the

production and reproduction of all the structures that constitute the social system and the reflexive competencies of what he calls an agent. The agent, the reflexive practitioner, reflects on his or her action as it is constructed in a context which is itself always under construction but does not *solely* aim for a developmental insight or knowledge for a better practice as in the Schön (1991)'s conception of a reflexive practitioner (Giddens, 1984).

Third, other critical project work draws on the Latour's Actor-Network theory in PM. While "both Bourdieu and Giddens argue that people's daily routines are rooted in a taken-for-granted world" (Baert & Silva, 2010, p. 43), Latour (2005) does not believe that the human holds all of the power. He suggests that machines and other material and technical components, far from being socially inert, are capable, like the humans, to make a difference and to transform social life. For example, Linde and Linderoth (2006) examine IT projects and shed a different light which both mainstream PM research and Critical Theory approaches cannot warrant.

All in all, in order to contribute to overcoming the rigor-relevance gap, we ask:

- 1) To what aspects of PM do we turn when examining PM from a Bourdieusian or a Giddensian view as a social practice?
- 2) Aren't we merely focusing on the power relations of which social practice is a vector of reproduction?
- 3) Are there still other sociological concepts, notions and approaches that have not yet been tapped by project researchers and that may lead us to unchartered paths in PM research?

### Pillar 4: Ontology and Epistemology

If you ask scholars what is the crucial and single most important issue for project research, they are likely to tell you that it is the development of a solid and explicit theoretical basis (e.g., Gauthier & Ika, 2012). Obviously, this call speaks about the rigor challenge in PM, a pluralistic field that enjoys contributions from a number of perspectives, images, and schools of thoughts (Söderlund, 2011; R. J. Turner et al., 2010; Winter & Szczepanek, 2009).

Despite the focus on rigor in the rigor-relevance debate in PM research, not enough attention has been given to ontology and epistemology which, along with methodology, are at the forefront of the rigor concern (a few exceptions include, Cicmil & Hodgson, 2006; Gauthier & Ika, 2012; Damian Hodgson & Cicmil, 2006; Ika & Bredillet, 2016; Linehan & Kavanagh, 2006; Morris, 2013a, 2013b; Winter et al., 2006). We would argue that this is risky for the quest of a rigorous PM research: "If we researchers, are unclear about the ontological and epistemological basis of a piece of work, we may end up criticizing a colleague for not taking into account a factor which his/her ontological position does not allow for" (Grix, 2002, p. 177).

Thus, ontology (what is out there to know) and epistemology (how can we know about it) are critical underpinnings in our research. Indeed, our understandings of PM are not the same if our work is of a rather modern, postmodern or hypermodern inspiration and they mirror different root ontological and epistemological assumptions. These assumptions are not the same if our research is a "mainstream" one or a "critical" one, and they differ even amongst mainstream or critically minded PM scholars.

Therefore, in the quest for a rigorous PM research, we challenge project researchers to emulate Comte (1853/2009), the famous father of social physics, and his famous work, *The Course of Positive Philosophy*, in order to define their own ontological and epistemological positions and to describe them explicitly (Bredillet, 2010; Cannella & Paetzold, 1994; Daft & Lewin, 1993; Gauthier & Ika, 2012; Ika & Bredillet, 2016; P. Johnson & Duberley, 2000; Morris, 2013a, 2013b; Pfeffer, 1993; Smyth & Morris, 2007). So, we ask: are we researchers aware of the ontological and epistemological basis of our research project and how it could help us overcome the rigor-relevance gap?

## Ontology

Do we believe, as most mainstream or modern PM scholars do, that things such as projects are hard, concrete and real entities external to the individual and independent from our thinking (a realist ontology)? Or instead, do we take the side of those who consider that words define reality, which is therefore made of nothing but conventions such as names, concepts and labels (a nominalist or conventionalist ontology)? Or do we argue, like many hypermodern PM scholars, that there is, in projects, a Parmenidean-inspired Democritean, synchronic, being or thing ontology of an unchanging and stable reality or instead a Heraclitean, diachronic, becoming or process ontology of a changing and emerging reality? (Burrell & Morgan, 1979; Gauthier & Ika, 2012; Ika & Bredillet, 2016; Linehan & Kavanagh, 2006). Do we rather consider, like many postmodern PM scholars that at a deeper level of reality, what in fact exists depends on our thinking about it, i.e., is internal to our own cognition? (Gauthier & Ika, 2012).

Or following Bhaskar (1998), are we "critical realists" like (Morris, 2013a, 2013b)? In other words, do we believe that we might observe some sort of causal or, at least, quasi-causal relationships but what we observe is by no means the whole reality, just a subset of what, at a deeper level of reality, in fact exists?

Whatever claim we make in a specific piece of research, we ought to realize that we knowingly or unknowingly leave some of the other facets of the whole project reality in the dark (Gauthier & Ika, 2012). And this is not without consequence for what we claim to know, how we know it, and what this entails for overcoming the rigor-relevance gap.

## **Epistemology**

PM enjoys a diverse and pluralistic epistemological basis. Some scholars propose three epistemological underpinnings for PM research: positivism (after Comte, 1853/2009), constructivism (after Berger & Luckmann, 1967; Le Moigne, 1995) and subjectivism (after Searle, 1997) (e.g., Bredillet, 2010). As in Sociology and Management, not everybody in PM shares this view, nor do they agree about the meaning of positivism. For example, while Bredillet (2010) refers to the Comtian positivism, Smyth and Morris (2007) puts forth logical positivism. (While both Comtian positivism and logical positivism have had their critics, e.g., Popper (1992), we think that such arguments are out of scope for this paper).

We note that positivism is a word first coined by Auguste Comte, who, with his law of the three stages, suggests that ideas about all social phenomena must pass through three phases, namely the theological, the metaphysical, and the positivistic or scientific. Thus, the Comtian positivism

emulates natural sciences, and seeks, through meticulous observation and experimentation of social facts, to discover laws or fundamental properties and relations of the social universe, and to express these in a small number of abstract principles (J. H. Turner et al., 2012).

The logical positivism (logical empiricism or neopositivism) of the Vienna Circle goes one step further and proffers that only knowledge claims that are clear, unambiguous, and meaningful, i.e., knowledge statements made in a logico-mathematical format and therefore subject to empirical test or verification should be given scientific consideration. Thus, some are analytic statements that can be true or false by dint of the meanings of the terms that they are made of, and others are synthetic statements, by dint of observations (Kaplan, 1968).

At this point, this rather cursory overview of the positivist epistemologies underpinning PM research leaves us with the following question: if positivism means different things for different PM researchers, then what bearing might this have on the kind of knowledge they produce and what does this mean for the PM field as a whole? So, we invite PM scholars to weigh in such a question and, equally, to ask themselves what they really mean when they cast themselves as positivists or constructivists?

After Le Moigne (1995), but contra Bredillet (2010), we would, for the sake of this discussion, distinguish between positivists and constructivists. But constructivism also means different things to different scholars and they deploy it in different ways. A cursory discussion of constructivism would show that knowledge is theory-driven and researchers should make clear their *a priori* theoretical position; that it is neither feasible to separate the researcher (subject) and the

phenomenon under study (object); that practice exists both before and after theory; that any theory is discursive and power-laden, not just rational as positivists would contend; and that research is socially constructed in a "community" of scholarship with mutually held assumptions that underpin "conversations" in the field (e.g., Mir & Watson, 2000). As an in-depth discussion of constructivism is beyond the scope of this paper, we identify four perspectives that a constructivist PM scholar may espouse: 1) The scholar socially constructs PM knowledge while discovering project reality; 2) The scholar constitutes project reality while practitioners construct their PM knowledge; 3) PM knowledge is the fruit of co-construction by both scholars and practitioners; 4) Any PM knowledge goes since it is discursive and power-laden.

The first constructivist perspective is espoused by Polanyi (1962) and Kuhn (1996) whom Nye (2012/2013) presents as key figures of the social construction of science or knowledge that feel reverence to natural science and the way it gets to discover what is out there to be known. Polanyi holds that there are two kinds of knowledge including scientific knowledge, one explicit, articulated and objective, and the other, tacit, unarticulated and subjective, which are bound together. After Polanyi, Bredillet (2010) proposes an integrative ontological and epistemological framework and a praxeological perspective of the production of PM knowledge. Like Polanyi, Kuhn (1996) favors a social construction of natural science, which he suggests, goes on and on, from pre-paradigmatic science to normal science, then through crisis, to new normal science and new crisis. Paradigms or specific sets of beliefs, values, theories, research methods and techniques are therefore socially constructed and reflect the dominant power interests of their time. After Kuhn (1996), Bredillet (2010) argues that the PM field is in a pre-paradigmatic phase. Kuhn's perspective along with Lakatos (1970)'s notion of a hard core for any science leads

Anagnostopoulos (2004) to suggest project and project management as the hard core of a PM research program.

The second constructivist perspective emphasizes the construction of knowledge by practitioners and puts forth the idea that they can be reflective practitioners and, thus, they create PM knowledge while they practice PM (P. Bourdieu, 1990; Lalonde et al., 2010; Lalonde, Bourgault, & Findeli, 2012).

The third constructivist perspective overcomes the opposition between the knowledge constructed by researchers and that which is constructed by practitioners (Giddens, 1993). Practitioners reflect back on their PM practice, and, thus, construct PM knowledge during their practice. Researchers, rather, construct their PM knowledge while they study PM practice. In so doing, both take into consideration and benefit from the knowledge that is produced by one another in a virtuous and dynamic double loop process (see for example, Shipton & Hughes, 2013).

There is a fourth and last constructivist perspective that would interest those scholars who think the above three perspectives are conservative. They submit, like many postmodernists, that anything goes and therefore that any knowledge, and for that matter any phenomenon that is under study, is a pure construction of our mind. Hence, we may say that any knowledge is discursive and power-laden (Sergi, 2010; Von Glaserfield, 1995).

Taken together, in line with the above discussion on constructivism, here are a couple of reflexivity questions that we submit to the PM community of scholarship in order to contribute to overcoming the rigor-relevance gap:

- 1) When you say that your epistemological underpinning is constructivist (e.g., Aubry & Lenfle, 2012) we ask: what do you really mean?
- 2) Also, is it possible to overcome the opposition between mainstream PM and critical PM, or between positivist and constructivist PM scholars? To what extent can Bredillet (2010)'s or Giddens (1993)'s work help?
- 3) If you believe anything goes, then what is the purpose of producing a scholarly work? Why publish in scholarly journals, why not in other media? As Mats Alvesson and Sköldberg (2009) ask, in publishing in traditional journals, aren't postmodernists contributing to the reproduction of the same schools of thoughts that they denounce?

#### Conclusion

In conclusion, we argue that relevance, rigor and reflexivity (hereafter 3R) have become an oftendebated topic in Management research and that the 3R-challenges are even more pressing yet insightful in the Project Management (PM) field. Thus, we contend that the question "What does a researcher need to be aware of if he/she aims to carry out a reflexive, relevant and rigorous PM research?" is of a great interest for PM scholars.

Throughout this paper, we have made the case that reflexivity can help in the rigor-relevance debate in PM research. We believe that reflexivity is not an end in itself but instead a means to an end: produce more high impact or more relevant and rigorous research (M. Alvesson et al., 2008).

To that end, we have proposed four pillars for crafting a reflexive, relevant and rigorous PM research along with reflexivity questions that scholars, and in particular young scholars, should take on if they are to be aware of their take on the 3R-challenges and the interplay between ontology, epistemology, social theory, PM history, history of the social world, the status of their knowledge field, and project research practice.

The first pillar deals with the status, scope, content, means and ends of PM as a knowledge field. The second pillar offers a premodern, modern, postmodern and hypermodern historical account of PM research. The third pillar sheds light on the influence of social theory on how we think project and PM. The last and fourth pillar covers our ontological and epistemological positions in undertaking PM research, and thus, concerns the rigor preoccupation in PM research. All four pillars, we argue, share some concern, albeit at different levels, for the rigor-relevance gap, with the second and third pillars being the most insightful as they show how either relevance or rigor has been given primacy in different understandings of PM.

While this is our clarion call for a reflexive, relevant, and rigorous PM research, we do not wish to convey the impression that the four pillars are independent or operate in silos. Nor do we want to promote any specific pillar at the expense of any other. Rather, we hasten to note that not only the four pillars are altogether important and should be integrated, but most importantly, that they interact with one another and that they cannot therefore be actually separated. To paraphrase Mats Alvesson and Sandberg (2013a), it is at the interface of the pillars that the inspiration – and the possibility of – reflexivity is the strongest. Interestingly, it is in the dialectical relationships between these pillars (see Figure 1 for a good example of relevant reflexive questions) that we

have the best scholarly opportunity to eventually overcome the rigor-relevance gap in PM research. Indeed, as Mats Alvesson and Sköldberg (2009, p. 272) Alvesson and Sköldberg (2009, p. 272) note: "Reflexivity arises when the different (...) levels are played against each other. It is in these relations and in the interfaces that reflexivity occurs".

Finally, in writing this paper, we have come to realize that, although the four-pillar framework along with the corresponding reflexive questions may appear broad and encompassing in their scope and generic and standard in their description, the stance of the researchers is undoubtedly idiosyncratic and may even vary from one research project to another.

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## Footnotes

<sup>1</sup> The legal legitimated order consists in binding agreements or rules among actors or by an external authority that can impose and enforce rules, the violation of which may lead to negative sanctions to faulty actors. Other types of legitimated orders include: *traditional*, an order that reflects the ways things have always been; *affectual*, an order that speaks to emotional attachments to the way things have always been; *value-rational*, the idea that the current order is the best way of getting things done (J. H. Turner et al., 2012).