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From gaps to tangles: A relational framework for the future of the theory-practice debate

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ABSTRACT

The article contributes to a better understanding of the relation between management theory and managerial practice by providing an integrative and historically contextualized review of the theory-practice debate among management scholars, and by proposing a new integrative position which we call entanglement. The integrative review reveals that since its origins in the 1950s up to the last decade, positions in the debate have shifted according to a rigor-relevance pendulum, portraying academics and practitioners as members of distinct, closed communities. To advance this debate, we propose an entanglement position which re-conceptualizes relations between academics and practitioners as trans-epistemic networks of interest within which knowledge can travel via three different boundary spanning strategies: legitimation, mobilization, and enactment. By showing the different degrees of relational intensity (i.e. required boundary spanning effort) of these strategies, we reconcile and integrate contrasting findings in the theory-practice debate. We advance the debate by proposing new research directions in relation to each strategy.

1. Introduction

To address future challenges, science fields commonly develop self-reflexive agendas related to the status and evolution of the discipline, and through its 60 years of existence, management science has been no exception (Hambrick, 1994; Walsh, Meyer, & Schoonhoven, 2006). Numerous presidential addresses at scholarly associations, and journal special issues in both Europe and the U.S. show that a central and recurring question for the discipline has been: As researchers, how good are we at developing knowledge for the future that is both scientifically sound and relevant to practitioners? Generally, much effort has been devoted to clarifying the meaning of words such as 'relevance' and 'valid knowledge' (Bartunek & Rynes, 2014). However, more often these contributions have compiled evidence about what relevance and valid knowledge are not, and warned about the ever-widening gap between management scholarship and managerial practice (Hambrick, 1994; Pfeffer & Fong, 2002; Starkey & Madan, 2001). The multiplicity of contradictory arguments and proposed solutions has resulted in the theory-practice debate being rife with contradictions and hidden under a veil of ambiguity (Aram & Salipante, 2003; Kieser, Nicolai, & Seidl, 2015).

It is widely acknowledged that in Europe and in North America management was established as an applied field. In the 1800s, pioneers of the so-called 'modern management thought' such as James Watt, Robert Owen, Frederick Taylor and Henry Fayol performed the first work experiments and began proposing standards to improve the effectiveness of the work in their factories. Until the 1940s, doubtful of its scientific worth, governments in Europe and North America refused to support business education, leaving it up to industrialists to determine its course. This resulted in industrialists being responsible for the emergence of the first business

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schools, crafting the first business curricula and teaching the first courses themselves (Kaplan, 2017). In the late 1950s, Ford and Carnegie Foundation reports in the U.S. (Gordon & Howell, 1959; Pierson, 1959) denounced the contradictory findings from applied management research, and expressed their concern about lack of scientific rigor. According to these reports, a more rigorous approach would have increased the scientific status of management and provided more robust solutions to industry problems. Within a few years, these views became highly influential across business schools in Europe and North America and triggered a 'scientization' program based on practices such as hiring faculty based on research quality, and peer-reviewed management journals (Augier, March, & Sullivan, 2005; Kaplan, 2017). Paradoxically, in less than 20 years after the scientific turn, management scholarship became so 'scientific' and so disconnected from real world phenomena that scholars began to plead for a return to the world of practice (Porter & McKibbin, 1988; Susman & Evered, 1978). Since then, the theory-practice debate has increased across the two continents, and especially among management scholars whose voices have been dominant, thus transforming it into an academic debate (Gulati, 2007; Starkey & Madan, 2001). Academics and practitioners are typically represented in this debate as protagonists from two different worlds operating according to distinct logics and driven by different incentives. In this perspective, the main prerogative of management science is the production of theoretical knowledge that is rational, impartial, systematic and analytical, commonly described as 'mode 1′ knowledge. In direct contrast, the prerogative of the managerial world is enacting practices that are context-dependent, pragmatic, open-ended and action-oriented or 'mode 2′ knowledge (Beyer & Trice, 1982; Ghoshal, 2005; Kieser & Leiner, 2009). As management thought diversified into new paradigms, the rigor-relevance pendulum has continued to swing, with scholars arguing for either rigor or relevance or both. For instance, while some management paradigms argue that adopting higher standards of scientific rigor would increase practical relevance (Briner, Denyer, & Rousseau, 2009; Rousseau, 2006), others continue to argue it is precisely the focus on rigor that pushes the management discipline away from managerial concerns (Ghoshal, 2005; Pfeffer & Fong, 2002). Other contributions even refuse the rigor-relevance trade-off and claim that only through integration can the discipline evolve (Pettigrew, 2001; Shapiro, Kirkman, & Courtney, 2007) while yet others see mode 1 and mode 2 as mere stylistic conventions (Aram & Salipante, 2003). This diversity of contrasting standpoints testifies to the need to understand what really constitutes the so called 'gap', and how the debate can be advanced in a society that is changing for both management science and managerial practice (Jarzabkowski, Mohrman, & Scherer, 2010; Roth, Sales, Perez, & Kaivo-oja, 2018).

By using an integrative literature review method (Torraco, 2005), this work provides an overview of the contributions to the theory-practice debate from its origins up to recent times, and focuses on future developments. To overcome the rigor-relevance spectrum of the existing positions (labelled evidence-based transfer, collaboration, natural incompatibility and forced incompatibility), we propose a new position - entanglement - which offers a different perspective on the future of the theory-practice relation in management. Since the production of management knowledge relies increasingly on hybrid collaborative systems of expertise (i.e. trans-epistemic networks), the boundaries between academic and managerial systems, or between mode 1 and mode 2, are becoming more and more blurred. Consequently, academics and practitioners are becoming increasingly familiar with trans-epistemic boundary spanning strategies: practices that allow them to 'use' each other's knowledge for their own interests despite differences (Callon, Rip, & Law, 1986; Karin Knorr-Cetina, 2009). We depict three boundary spanning strategies, legitimation, mobilization and enactment, characterized by different relational intensity, depending on the increased *effort* that academics and practitioners must sustain to integrate their interests. We argue that theorization about different degrees of relational intensity offers an alternative explanation for the contradictory arguments in the theory-practice debate. Specifically, academics and practitioners focused on self-legitimation may be better able to cross interest gaps than those working towards shared, collaborative goals (i.e. mobilization and enactment strategies).

The entanglement position presents several advantages. First, rather than seeking a normative solution for the theory-practice debate -by defending arguments in favor of one position or another- it provides a set of tools to observe how the relation between theory and practice varies empirically as academics and practitioners relate to each other in the real world. From that standpoint, it also offers symmetric treatment of the interplay between the theories and practices of academics and those of practitioners. Third, it sets the ground for a process-based view of the theory-practice relation which currently is lacking in the theory-practice debate. Fourth, a research agenda focused on trans-epistemic boundary spanning takes account of a changing society where future management topics will stem from complex interactions among cross-cutting systems (Roth, Sales, & Kaivo-oja, 2017).

2. Methodology

Integrative literature review is a form of research which assesses, critiques, and synthesizes representative literature on a topic in an integrated way with the purpose of generating new frameworks and perspectives (Torraco, 2005). Integrative reviews do not examine all aspects of previous research but rather depart from an interest in specific aspects of previous research which are examined and evaluated critically. As a result, the review aims at telling a story by critically analyzing the literature and arriving at specific conclusions about it. The method has been shown to be particularly useful as a topic matures through time and the body of its literature grows, giving rise to contradicting and/or ambiguous findings (Torraco, 2005). We performed a critical analysis of the theory-practice debate literature by carefully examining and critiquing the main ideas and relationships identified. We searched in *Thomson Reuters Web of Science* for combinations of keywords such as 'management theory practice gap'; 'management rigor relevance'; 'management theory & managerial practice'; 'organization science & business practice'; and 'management academics & business practitioners' which identified a sample of 152 articles. Our sample included works from all journals included in the *Thomson Reuters Web of Science*. Then, using *Scopus* and *Google Scholar*, we adopted a snowball sampling procedure: we checked the citation indexes of identified articles to discover additional contributions of potential interest. Filtering these articles by title and abstract left a total of 197 relevant articles. We read the introduction sections of all these articles and discarded works that mentioned a

Table 1
Guidelines for organizing an integrative literature review (drawn from Toracco, 2005).

Guidelines for integrative reviews	Operationalization of guidelines in current study
1. Organizing the review article around a coherent conceptual structuring of the topic.	• Understanding the guiding theory about the theory-practice relation in management; • Making sense of a set of competing arguments about the current state, outcomes and consequences of the theory-practice debate.
2. Describing methodology for the selection and review of relevant works.	• Database search: Thomson Reuters Web of Science, Scopus, Google Scholar; • Keywords (combinations): 'management theory practice gap'; 'management rigor relevance' 'management theory & managerial practice'; 'organization science & business practice'; 'management academics & business practitioners'; 'business schools management practice'; • Criteria used for retaining or discarding the literature: Multi-stage review based on snowball sampling; abstract and introduction read by both authors, periodic discussions to establish inter-rater reliability; • Strategy for literature review analysis: complete reading of each piece of literature; Recurrent theme identification through open and axial coding (Strauss & Corbin, 1998) using Nvivo software.
3. Synthetizing existing literature on the topic, providing critique.	• Identification of key themes in the debate: (1) actors of the theory-practice relation; (2) definitions of theory and practice (3) definitions of the relationship between theory and practice; (4) direction of the relationship between theory-practice; (5) evaluation of the current situation (6) proposed solutions.
4. Synthesizing knowledge from the literature into a significant, value-added contribution to new knowledge on the topic -i.e., What forms of synthesis are used to stimulate further research on the topic? Step 1: Taxonomy/conceptual classification Step2: Alternative model or new research agenda.	• Developing a taxonomy for the positions in the theory practice debate: evidence-based transfer, collaboration, natural incompatibility, forced incompatibility; identifying the context on which each position draws; studying the progression of the debate from a position to another; • Proposing an alternative conceptual framework called theory-practice entanglement that reorganizes, integrates, and advances arguments of the previous positions; • Developing a provocative explanation for the contradictory findings in the debate by theorizing about three types of academic-practitioner boundary spanning with varying relational intensity; • Using the arguments in the entanglement position to propose a future research agenda for the theory-practice debate.

management theory or paradigm, or discussed the state of management science in general but made no reference to managerial practice. This resulted in the inclusion in our analysis of 137 contributions which mentioned the relationship between management science and managerial practice.

Table 1 systematizes our methodology following the integrative review method.

Critical analysis in integrative review requires first deconstruction of a topic into its basic elements and conceptual reconstruction to achieve a clearer understanding of the topic, identifying strengths and deficiencies, omissions, inaccuracies or inconsistencies (Torraco, 2005). To this purpose, after creating a database, we performed open coding to identify, name, categorize and describe the main themes in the articles. The following key themes emerged: (1) actors in the theory-practice relation; (2) definitions of theory and practice; (3) definitions of the relationship between theory and practice; (4) direction of the relationship between theory and practice; (5) evaluation of the current situation; and (6) proposed solutions. The next step involved synthesizing the identified knowledge to produce a better understanding of the topic, for instance by creating a taxonomy (Doty & Glick, 1994; Torraco, 2005). We clustered differences related to the identified themes (1–6) and came up with four positions which we labelled evidence-based transfer, collaboration, natural incompatibility and forced incompatibility. To ensure these positions provided for a significant, value-added discussion of the topic, we continued to look for relationships among them such as history and origins of each position, its main concepts and the key links through which the concepts interact. For instance, we interrogated the data set as follows: 'What is the social and historical context in which the debate shifted from one position to the next?' We identified a timeframe in our sample going from the pioneering contributions of Gordon and Howell and Pierson in 1959, up to 2017. Subsequently, we inquired about conceptual relationships between the identified positions (i.e., 'What aspects do the four positions have in common, and where do they differ?';'To what extent do the positions talk to each other?'). This integrative inquiry revealed a swinging pendulum which was preventing the debate from advancing. In line with the objective of an integrative review to lay the ground for the creation of alternative models or conceptual frameworks related to the focal topic, we consulted other literature streams (sociology of science and actor-network-theory, studies on transdisciplinarity published in *Futures*) to rearrange the arguments derived from the previous steps, allowing development of a new position called theory-practice entanglement.

3. Integrative review of the theory-practice debate

3.1. The origins of the theory-practice debate: management as pre-science

The origins of the theory-practice debate coincide with the constitution of modern management as a scientific field (Starbuck, 2003). It is widely accepted that the first management thinking came from management practitioners. Between 1890 and the 1950s the scientific management movement emerged based on the Industrial Revolution's pioneers need for efficient planning, organization and control of work activities. At the end of the 1800s, in Great Britain's Soho Engineering Foundry, James Watt Jr and Matthew Robinson Boulton, the sons of the inventors of the steam engine, systematically implemented management techniques such as market research, production standardization, planning and forecasting. In the U.S., in the 1880s Frederick Taylor of the Midvale Steel Company proposed a shift from management as a 'rule-of-thumb' to management as a scientific method for organizing complex processes in large industrial firms, and recognized the need for professionally trained managers. At that time, the scientific principles of management were derived from industrialists' experiments in their factories, and business education was based largely on these experiments (Keulen & Kroeze, 2014; Pindur, Rogers, & Suk Kim, 1995; Witzel, 2016). At the same time, between 1819 and 1944, business schools were being founded in both Europe and North America to respond the new challenges posed by the Industrial Revolution. In Europe, trader Vital Roux and neo-classical economist Jean-Baptiste Sayco in 1819 founded ESCP, Europe, the world's first business school which combined interdisciplinary theory and practical approaches to business education (Engwall & Zamagni, 1998; Kaplan, 2017). The first business school in the U.S., the Wharton School of Finance and Commerce, was set up thanks to a $100,000 donation from the industrialist Joseph Wharton. Strongly influenced by Taylorism and the work of Adam Smith, the Wharton School aimed "to create a liberally educated class of leaders" (Sass, 1982, p. 20) to improve economic efficiency, especially through labor productivity.

It is interesting to note that neither U.S. nor European business schools were well received by the academic community although for slightly different reasons. European schools initially founded outside the established universities, were not considered capable of teaching a practical discipline such as management in a scientific manner. Meanwhile, U.S. business schools were accused by professors of established disciplines of lowering universities' academic standards. To escape these criticisms, business school supporters worked on transforming management from a trade into a rigorous profession (Engwall & Zamagni, 1998).

The first efforts to turn management science into a standalone intellectual field laid the foundations for the first arguments in the theory-practice debate: the belief on the one hand that theories developed in business schools must be science-grounded, and on the other that they must be transferred to the practice world to serve the interests of managers and their organizations (Gordon & Howell, 1959; Pierson, 1959). Ideally, the theory-practice relation should follow a circular path: theories that academics derive from the world of practice using scientific methods should return to the world of practice to guide managers' best practice (Augier et al., 2005; Baldridge, Floyd, & Markoczy, 2004; Beyer & Trice, 1982; Van de Ven, 2007). However, as management developed into an academic field and split into multiple streams of thought, academics started to complain that management was neither 'scientific' nor 'applied', and therefore the state of the field was qualified as unsatisfactory (Hambrick, 1994; Huff & Huff, 2001; Pfeffer & Fong, 2002). Specifically, the flow from theory to practice was discontinuous due to the existence of a persistent theory-practice gap, typically framed in the debate in several ways. In what follows, we detail the evolution of the theory-practice debate into different streams of thought (the four positions we have identified) while also drawing on the social context in which they developed.

3.2. The evidence-based transfer position – 'nothing as practical as our good theory'

The transfer position has been the dominant perspective in the theory-practice debate and includes multiple waves of management thought from its foundation as an academic field to recent developments. After World War II, with Europe's economy in ruins, the U.S. emerging as the dominant power in the western world, and the success of the American model of multi-national corporations, the U.S. approach to training managers began to be perceived as a weapon of social change (Engwall, Kipping, & Üsdiken, 2016; Kaplan, 2017; Keulen & Kroeze, 2014). When at the end of the 1950s the Gordon–Howell and Pierson surveys reported that business practitioners deemed management concepts too fragmented and unscientific, and thus useless for practitioners dealing with the socio-economic changes of the after war, several investment programs such as the Ford Foundation focused on transforming management into a rigorous science (Gordon & Howell, 1959; Pierson, 1959). The management field as we know it today was rapidly established: new hiring policies led to the recruitment of researchers with backgrounds in established social sciences such as economics, psychology and sociology; tenure in academia became based on scholarly publication, and numerous peer-reviewed journals focused on increasing the rigor and convergence of findings in management research (Augier et al., 2005; Durand & Dameron, 2011).

Within this social context, the Gordon and Howell (1959) and Pierson (1959) reports constituted the first contributions to the mainstream position in the theory-practice debate which we label 'evidence-based transfer'. According to these seminal works, "there is nothing as practical as a good theory" (Lewin, 1951, p. 486), meaning that theory developed in academia can always fill a gap in managerial practice as long as it conveys a good representation of reality (Donaldson, 2002; Miner, 2003). Accordingly, the more rigorous the theory, the closer it is to truth, and therefore, the higher its chances of survival in both academia and the practice (Baldridge et al., 2004; Rousseau, 2006). The quantitative management movement became a tool for rigorous management research. Initially a solution to military problems during the World War II, it implied adapting mathematical, statistical and computational models to management situations such as decision making and problem solving to provide solid evidence of what happens in complex organizational settings, particularly in relation to planning and control processes (Augier et al., 2005; Keulen & Kroeze, 2014; Starbuck, 2003). From such a standpoint, if management science showed repeatedly that factor x causes y, a practitioner wanting to

obtain y will know it is necessary to do x. However, management science is limited to understanding what 'is' (i.e. evidence-based normative knowledge) and it is left to business practitioners to understand what ought to be done in particular situations (Briner et al., 2009).

From the 1980s to 2000, the quantitative movement evolved by integrating new theories suited to modern organizations. The creation of large multidivisional conglomerates during the 1960s' mergers and acquisitions wave caused a gradual shift from shop floor to boardroom, and increased attention on the behavior of top managers and the spread of strategic management concepts (McKenna, 2006). In turn, as academics proposed and tested relationships among activities within large organizations using statistical models, management concepts started to proliferate beyond control, causing a knowledge transfer gap between theory and practice. First, academics lamented that management theories were not sufficiently rigorous to offer practitioners irrefutable proofs of the best solutions. When John Argenti wrote Corporate Collapse (Argenti, 1968), he identified over 100 management concepts that bore little relation to one another and offered contrasting suggestions to business practitioners. Seven years later, in his updated book, he identified more than 300 concepts (Keulen & Kroeze, 2014). Some years later, Miner (1984) analyzed over 30 established organizational theories and concluded they were generally of little importance, validity or usefulness. Later, Pfeffer and Sutton (2006) claimed that the plethora of fragmented management theories and contrasting findings, overspecialized outlets and scholarly jargon disoriented management practitioners and discouraged them from searching for evidence-based solutions (Cohen, 2007; Kelemen & Bansal, 2002). Consequently, academics complained that practitioners preferred to rely on their own experience and on knowledge provided by consultants and popular books even though grounded in weak and deceiving evidence (Donaldson, 2002; Pfeffer & Sutton, 2006).

For those scholars we include in the transfer position, to solve the theory-practice gap meant advancing the scientization of management. Several authoritative voices in the field acknowledged the need to institutionalize a strong, unitary paradigm that allowed for scholarly consensus and clearer prescriptions for practice (Gordon & Howell, 1959; McKelvey, 1997; Miner, 2003). This paradigm has been referred to increasingly as evidence-based management, an approach which encourages systematic use of statistics to increase the rigor of management research while offering more convergent indications for practice (see Briner et al., 2009; Rousseau, 2006).

3.3. The collaboration position – 'together we could do so much'

The view that we labelled 'collaboration' has been the main alternative in the theory-practice debate. By the 1980s, academics were suggesting that the pendulum had swung too far in favor of rigor at the expense of potential relevance (Porter & McKibbin, 1988). Riding on the wave of the contingency approach proposed by organizational theorists Lorsch and Lawrence (1967), an increasing number of scholars highlighted that management theories were not universally valid in practice, and called for an assessment of organizations as unique, context-embedded systems. The emergence of strategy (Ansoff, 1965; Drucker, 1954; Mintzberg, 1973) not only glorified the decision-making manager and further emphasized the uniqueness of business practice situations, it introduced the competitors of management academics -i.e. consultants and management gurus who embraced a set of overlooked concepts such as uncertainty, rapid change, total quality management, re-engineering, knowledge management, the learning organization and shareholder value, among others (Engwall et al., 2016). In an influential work, Susman and Evered (1978) criticized the positivist tradition in management science for generating knowledge of no real use to management practitioners, and this message was reinforced in another influential study by Beyer and Trice (1982) which showed that scholarly management journals were disconnected from the pressing issues faced by practicing managers.

The debate simmered after these first proposals but did not evaporate, and in the 2000s it resurfaced more fervid than ever (Gulati, 2007). Presidential addresses by influential scholars such as Donald Hambrick (1994) and Bartunek (2003), suggested that instead of searching for a singular true solution, academics and practitioners should work together to build optimal solutions which increased the theory-practice fit (see also Susman & Evered, 1978; Starkey & Madan, 2001; Van de Ven, 2007). To enable this, academic research should be made either interesting or useful to practitioners (Pettigrew, 2001). The fact that most of the time this was missing was attributed to academics' and practitioners' different relevance systems (Beyer & Trice, 1982; Porter & McKibbin, 1988). While academics were concerned with providing abstract and holistic descriptions that met scientific standards, practitioners were mostly interested in understanding and manipulating portions of reality in relation to short range objectives (Van Aken, 2005). Additionally, most of the time knowledge is produced at different rates so rigorous theories cannot keep pace with the rapidly changing needs of practitioners (Huff & Huff, 2001; Tranfield & Starkey, 1998).

As a solution to the relevance gap, Susman and Evered (1978) proposed the action research method, according to which academics can generate meaningful theory only when studying and trying to change organizations from the inside. Later, an influential work by Andy Van de Ven (2007) proposed a similar solution which he called engaged scholarship; in addition to getting academics involved in business practice, it envisioned the close collaboration of academics and practitioners in pursuit of common goals. According to these proposals, by designing and setting up permanent collaboration infrastructures such as university-industry partnerships, professional alliances and multidisciplinary research forums, academics and practitioners could mutually adjust rigor and relevance frames and generate optimal solutions for both sides (Lawler, 1985; Van de Ven, 2007).

3.4. The natural incompatibility position – 'if we weren't different, we would not exist'

Given the failure of the transfer and collaboration positions to put an end to the theory-practice debate, other new positions emerged. The natural incompatibility alternative suggests that management theory and practice cannot reasonably be compared even

if they occur in coincidence (Sandelands, 1990). The basic idea derives from systems theory (Luhmann, 1995) and implies that scientific and managerial systems are autopoietic: they exist precisely because they have thick external boundaries and different internal organization (Kieser & Leiner, 2009). Accordingly, scholars create the knowledge necessary to explain things and practitioners produce the knowledge to get things done (Sandelands, 1990). Managers cannot be taught what to do during their day-to-day work by academic theory because knowledge and skills lose value when transferred into another context (i.e. "You can't teach swimming or management in a lecture hall" (Mintzberg, 1990, p. 175). In the same way, academics cannot be taught by management practitioners how to confute previous theories or craft publishable research (Kieser & Leiner, 2009). Each system has thus a distinctive identity which depends on what is considered meaningful internally. The theory-practice gap cannot be bridged because it is not in the best interests of the two systems: If academia and business practice failed to maintain a unique identity, they will dissolve back into the environment, thus ceasing to exist (Kieser & Leiner, 2009). The natural incompatibility position has the merit that it problematized the taken-for-granted congruities in the evidence-based transfer and collaboration positions. Accordingly, it might not be sufficient for academics and practitioners to talk to each other because even when discussing the same phenomena, they might see different problems and opportunities to which they might respond in incommensurable ways (Kieser & Leiner, 2009). Consequently, scholars were encouraged to think more critically about the impact of their research without discounting the boundaries that separate them from the rest of the world (Mintzberg, 1990). However, the natural incompatibility position also entails paradoxical arguments which move it closer to the positions it criticizes (Hodgkinson & Starkey, 2011). For instance, although at odds with the natural incompatibility argument, the idea that "there is nothing so practical about theory (but it may be good to have around)" (Sandelands, 1990, p. 259) suggests that academics and practitioners might nevertheless contaminate each other through joint activities such as business consulting, education and practitioner-oriented journals (Kieser & Leiner, 2009)

3.5. The forced incompatibility position – 'outside straitjackets, pretty much alike'

Since 2000, management theory has been increasingly criticized by industry, government and academia. Management concepts focusing on short-term objectives and on shareholder value were delegitimized after a series of fraud cases such as Enron, Parmalat and Ahold. Moreover, after the increasing popularity experienced by CEOs, management gurus and consultants in the 1980s and 1990s, an anti-guru wave began to emerge (Engwall et al., 2016). In this context of change, the theory-practice debate became even more fervid (Gulati, 2007), and a new cluster of positions emerged, here grouped under the label of 'forced incompatibility'. The defining characteristic of these studies is criticism of the scientific approach and intent to value management as practice.

Just as in the previously described position, the forced incompatibility position defines management science and managerial practice as specialized social systems. However, rather than being naturally incompatible, the two are forced into incompatibility by the social and political interests of academics. For instance, the knowledge produced in academia is not substantially different from the knowledge that managers can develop on their own. Yet management scholars use the 'straitjacket of science' (Daft & Lewin, 1990, p. 1) to legitimize the superiority of their own knowledge. At times naïve and predictable (Courpasson, Arellano-Gault, Brown, & Lounsbury, 2008), at times rigid, narrow in scope and distant from the phenomena under study, management theory remains opaque to people outside academia (Corley & Gioia, 2011; Leavitt, 1989; Walsh et al., 2006). To make matters worse, academics' pseudo-scientific recommendations for practice risk harming good context-based managerial practice (Cannella & Paetzold, 1994; Ghoshal, 2005; Mintzberg, 2004; Pfeffer & Fong, 2002, 2004).

Concomitant with the postmodern turn in management studies, a model based on management as practice is proposed as an alternative to the scientific model. Specifically, 'critical management' and 'practice-turn' scholars propose to reform theory in academia according to the model of knowledge production in the practice world which is context-based and pragmatic (Chia & Holt, 2008; Sandberg & Tsoukas, 2011). Thus, the attention shifted from the generation of theories which eventually might be useful for practice to deep engagement with the study of the world as practice (Feldman & Orlikowski, 2011; Jarzabkowski et al., 2010; Weick, 2003; Yanow & Tsoukas, 2009). From this standpoint, academics and managers constitute communities of practice with distinct knowing-doing strategies (Jarzabkowski et al., 2010; Weick, 2001, 2003), and priority should be given to understanding how these communities produce mutually relevant knowledge in practice (Schatzki, 2001; Sandberg & Tsoukas, 2011). However, despite the merit of having challenged the distinction between academics as knowers and practitioners as doers, scholars arguing for forced incompatibility end up very close to the arguments in the collaboration position. By criticizing rigorous science and praising pragmatic practice, the pendulum swings once more towards the quest for relevance.

3.6. Not just another swing of the rigor-relevance pendulum

Table 2 offers a systematization of the positions in the theory-practice debate according to the six themes identified by our open coding (see methodology).

A recurrent theme across all the articles is that scientific rationality –i.e. detached inquiry about the world– is the distinctive mark of management academia while practical rationality –i.e. the strategy of achieving self-relevant goals to allow one to live in the world as well as possible– is the predominant competence of management practitioners (e.g., Briner et al., 2009; Ghoshal, 2005; Starkey & Madan, 2001; Walsh et al., 2006). Table 2 shows that what distinguishes the various positions in the debate is how they connote scientific and practical rationality. Specifically, the transfer and collaboration positions assume that scientific rationality is superior and progressive with respect to practical rationality, and must provide guidance about the best courses of action (Amabile et al., 2001; Donaldson, 2002; Rousseau, 2006). By contrast, the natural and forced incompatibility positions suggest that academia must draw inspiration from practical rationality which is more complex and sophisticated than scientific rationality (Chia & Holt, 2008;

Table 2
Synthesis of positions and arguments about the relationship between management academia and managerial practice.

	EVIDENCE-BASED TRANSFER	COLLABORATION	NATURAL INCOMPATIBILITY	FORCED INCOMPATIBILITY
1. ACTORS	A (academics) and P (practitioners) constitute different communities with very different yet bridgeable worldviews, interests, practices and capabilities;		A&P are non-communicative systems that produce incommensurable knowledge according to the incompatible logics of scientific and practical rationality, respectively;	A&P are distinct communities of practice. A & P act using similar knowledge & practices but try to appear as different as possible for legitimation purposes;
2. DEF. THEORY PRACTICE	Academia acts according to scientific rationality: knowledge produced is scientifically rigorous, abstract, impartial; Managers are driven by practical rationality: knowledge produced is commonsensical, context-relevant, and subjective;			Managerial practice is guided by practical rationality: knowledge is commonsensical, context-relevant, applied. Academic theory is also driven by practical rationality but is 'disguised' as rational, scientifically rigorous, and abstract (i.e., scientific rationality);
3. RELATION THEORY-PRACTICE	Transfer from A (produces scientific evidence) to P (must appropriate evidence-based knowledge)	Transfer from A in collaboration with the needs of P;	Missing: no logical operations can be performed between theory and practice;	Even if knowledge and practices of A and P are equivalent, A & P use them for different purposes (legitimation);
4. DIRECTION OF RELATION	Unidirectional relation; A superior to P; A must inform and correct P;	Unidirectional relation; A superior to P; A must initiate cooperation and create adequate conditions for P;	No causal relationship between the actions of A&P, at the most spurious correlation;	Ambiguous: A influences (i.e., subjugates, misleads) P but P is superior to A (practical rationality is 'natural' and 'authentic', scientific rationality is not);
5. CURRENT SITUATION EVALUATION	Unsatisfactory gap due to a) lack of rigor and b) lack of diffusion;	Unsatisfactory gap due to a) lack of relevance; b) lack of effective design of joint projects;	Neutral: incomparability;	Unsatisfactory: academic theory redundant and misleading for managerial practice;
6. PROPOSED SOLUTION	a) Increase rigor and language appropriateness of A; b) strengthen dissemination channels of A to increase awareness of P.	Create incentives, especially in A, for: a) engaged scholarship); b) co-design of joint projects.	Ambiguous: no problems and no solutions; contaminations are sought for despite natural incompatibility.	A should be reformed following the example of P (i.e., substitute scientific with practical rationality) or, when not possible, A should be eliminated to avoid harming P.

Sandberg & Tsoukas, 2011). Table 2 shows also that if a position highlights the worth of scientific rationality, it undermines the value of practical rationality, and *vice versa*, as in a swinging pendulum which does not allow the debate to move forward. In what follows, we develop the new position of theory-practice entanglement which provides a way out of the stagnant debate presented so far. By delving deeper into scientific and practical rationality, first, we acknowledge that both academics and practitioners theorize and act practically in their day-to-day worlds. Therefore, we integrate the previously identified positions by considering how definitions of theoretical and practical rationality may have changed in the spatial and temporal contexts navigated by management academics and practitioners in the last 50 years. Second, we move away from system level considerations (i.e. academia versus practice), to focus on the micro strategies through which academics and practitioners are shown empirically to work on their relationships in the real world. The relation between the four positions in the debate and our entanglement proposal is analyzed in detail in the following section.

4. The entanglement position

To provide future developments for the debate, we draw on social studies of science (Knorr-Cetina, 2009; Schatzki, 2001) and actor-network theory (Barbara Czarniawska, 2004; Latour, 1987), as well as on studies on transdisciplinarity published in *Futures* (Darbellay, 2015; Mobjörk, 2010; Polk, 2015; Wickson, Carew, & Russell, 2006). These studies have highlighted the social and economic changes leading to a post-modern and post-disciplinary shift in the sciences (Clegg, 2003) which question the dichotomy between scientific and practical rationality.

Specifically, with the rise of globalization and the change in focus from industrialization to knowledge-intensive activities, the management knowledge arena has become increasingly crowded, with multiple institutions with their own interests to advocate and defend (Starkey et al., 2004). Consulting companies seek to become the new trend setters in the business world: globalization and the rise of the internet era has seen them partnering with software and communication companies to prepare management concepts and education for mass consumption (Clegg, 2003; Frodeman, 2014; Starbuck, 2003). On the other hand, governments worldwide are systematically withdrawing public funding for universities, and encouraging academics to become more competitive in the knowledge market.

The challenge then is to develop a new vocabulary and a new set of understandings about academic-practitioner relations. We suggest that instead of the closed, abstract systems depicted by the transfer, collaboration and incompatibility positions, management academia and the business world have become increasingly intersecting and interdependent in what we call 'trans-epistemic networks of interest'. According to the sociologists of science (Knorr-Cetina, 2009), scientists across all domains are becoming capitalists -i.e. practical strategists who try to secure their interests with the help of other private and public organizations (for a discussion in the field of management see (Czarniawska & Sevón, 2005; Gioia & Corley, 2002). Similarly, practitioners dealing with new sources of uncertainty are investing in the market for ideas, setting up new alliances with academics and consultants and participating increasingly in cross-sector projects funded by government agencies (Starkey et al., 2009). A significant number of contributions to the journal *Futures* have referred to this situation as transdisciplinarity (Balsiger, 2004; Buanes & Jentoft, 2009; Darbellay, 2015; Dinges, Biegelbauer, & Wilhelmer, 2018; Frescoln & Arbuckle, 2015; Roth et al., 2018). Although definitions range from the most inclusive (i.e. all exchanges between science and society) to the strictest (i.e. the ultimate, most integrated type of collaboration between science and society), it is commonly agreed that transdisciplinarity indicates extended knowledge production including a variety of actors that are required constantly to cross the boundaries between different forms of scientific and practical rationalities (Mobjörk, 2010). Relevant actors in trans-epistemic networks are individual researchers, teachers, universities, management practitioners, consultants, gurus and other institutional stakeholders such as state governments, policy makers and transnational funding agencies (Fuller & Söderlund, 2002).

Within this context of increasing interconnectivity, we extend the theory-practice debate by proposing that it should no longer see academics as knowledge suppliers and practitioners as knowledge consumers but rather to consider them as strategists who increasingly need the other to perform well in the knowledge market. Table 3 summarizes the main assumptions of the entanglement position. To facilitate comparability with the four positions identified in the theory-practice debate, we use the six dimensions in Table 2.

In the definition of theory and practice, the distinction between rigor and relevance is overcome as is debate on the supremacy of scientific rationality vs. practical rationality. The concept of 'entanglement' suggests that in the changing context described above, it no longer makes sense to talk about theory-practice 'gaps' because academics and practitioners may as often as necessary leverage both gaps and bridges. To achieve their objectives, academics and practitioners increasingly are shown to act simultaneously as scientists and pragmatic doers, mixing what they consider rigorous and relevant. We refer to this as a 'trans-epistemic boundary spanning' mechanism.

The entanglement position helps also to explain why despite the changing context in which management academics and practitioners are situated, studies continue to lament the failure of academics and practitioners to relate meaningfully to each other. For example, the fervid discussion of transdisciplinarity featured in *Futures* often complain that transdisciplinary relations produce highly variable outcomes but they rarely explain why. In what follows, we show that academics' and practitioners' interests constitute the main trigger for boundary spanning. Yet, depending on how such interests are articulated, academics and practitioners can engage in three different types of boundary spanning strategies which require different levels of relational efforts: legitimation, mobilization and enactment. We argue that the higher the relational effort required, the more uncertain the outcomes of academic-practitioner exchanges become. We use the term 'boundary spanning' to emphasize the circular nature of academic-practitioner exchanges as opposed to the unidirectional relationships previously theorized in the debate (see direction of the relationship in Table 2 vs. Table 3).

Table 3
A synthesis of the entanglement position for the relationship between management academia and managerial practice.

	ENTANGLEMENT
1. ACTORS	A&P are entangled in trans-epistemic networks of interests; they have partially overlapping knowledge and practices that are instrumentalized according to changing interests.
2. DEF. THEORY & PRACTICE	Both A&P practice theorization (i.e., use commonsense to theorize) and may 'disguise' it as formal theory Both theories and practices imply thinking (i.e., interpretations and expectations) and acting (i.e., world interventions).
3. RELATION THEORY- PRACTICE	Three boundary spanning strategies with different relational intensity: *1. Legitimation*: A&P 'use' each other to achieve separate goals inside their own communities of reference, usually without interacting directly or being accountable to each other (e.g., indirect theory appropriation); *2. Mobilization*: A&P become allies to achieve separate goals inside their own communities of reference, usually by interacting directly and negotiating exchange conditions (e.g., executive education and consulting); *3. Enactment:* A&P join transdisciplinary projects and negotiate the pursuit of a common goal (e.g., multi-stakeholder partnerships)
4. DIRECTION OF RELATION	Symmetric and circular: A&P are both knowledge producers and consumers, brokers and translators; *1. Legitimation*: A&P can translate knowledge in the desired direction as they are not mutually accountable (low rel. effort); *2. Mobilization*: Usually, one active promoter/provider triggers the interest of a passive client; Recently roles are becoming balanced in terms of relational effort (medium rel. effort); *3. Enactment*: Together with other stakeholders, A&P must make high efforts to reconcile tensions and pursue integration towards a shared goal; When tensions are unmanageable, one party may take control over the partnership.
5. CURRENT SITUATION EVALUATION	Neutral: the continuous production of gaps and tangles is a natural process in loosely coupled networks; A&P transform management knowledge and its meanings to meet their own goals (i.e., fitting) and transform their worlds to accommodate new management knowledge (i.e., retrofitting). The higher the relational effort, the riskier the relationship (risk of creating 'gaps') but also greater the potential for radical transformation of A&P.
6. PROPOSED SOLUTION	*1. Legitimation*: Evaluate the value of knowledge created through legitimation strategies; *2. Mobilization*: Understand processes of negotiation (i.e., resistance and divergent expectations) *3. Enactment*: Study opportunities (i.e., learning and knowledge transformation) vs. collaboration risks (tensions, conflicts, resistances)

4.1. Legitimation-based boundary spanning – 'whatever it is, as long as it works'

Legitimation is the loosest and most common boundary spanning strategy used by academics and practitioners to reach out to each other. As shown above, legitimation has been discussed in incompatibility positions as a deterrent to academic-practitioner relations (see for instance the discussion on 'the straitjacket of management science'). It refers to cases where academics and practitioners 'use' each other to achieve goals within their own communities of reference without interacting directly. This can happen when academics conduct research in the practice world for internal (i.e., academic) purposes, or when management practitioners borrow concepts from management theory to justify actions in their organizations. Since such a strategy is relatively economic in terms of effort for both academics and practitioners, it may serve self-legitimating purposes. However, in contrast to incompatibility positions, we suggest that legitimation can have both boundary building and boundary spanning purposes.

As far as academia is concerned, philosophers and sociologists of science have strongly questioned the objective and uninterested image of science. According to Latour (1987), academics are no different from practitioners because they too, are pragmatic strategists. For instance, it is becoming increasingly important for academics to convince peers, reviewers, employers or governments that their work has value in and for managerial practice. Thus, academics are entering the practice world, studying it and then 'reworking' what they have observed to fit their own interests and concerns (Czarniawska & Sevón, 2005)

The argument can be applied symmetrically to management practitioners. In the early stages of the practice turn in management, supporters of the forced incompatibility position emphasized that managers are not only doers that try to modify their environments but also are sophisticated strategists in search of legitimation (March, 2006; Starbuck & Milliken, 1988). According to more recent studies of strategy-as-practice, managers actively seek scientific rationality as a symbol of progress, prestige and wellbeing (Cabantous & Gond, 2011). In addition, borrowing concepts from the outside has become an increasingly competitive race among organizations seeking to deal with uncertain futures (Rohrbeck, 2012; Waehrens & Riis, 2010). For instance, practitioners use decision trees, algorithms and optimization software inspired by rational choice theory to feel more rational and convey a sense of control and reassurance to other members of their organizations. From such a standpoint, invoking scientific expertise can be a source of power if it helps practitioners demonstrate competence in their organizations (Cabantous & Gond, 2011; Jarzabkowski & Kaplan, 2015). Chesley and Wenger (1999) show that implementation of the Balanced Scorecard in some organizations created career opportunities for early adopters who presented themselves as expert users, and generated career anxieties for those who felt unable to master it.

If we admit that both academics and practitioners increasingly need to 'use' each other to obtain success in their communities of reference, how should we qualify the knowledge they produce as they search for legitimation? Since legitimation-driven boundary spanning does not require academics and practitioners to reach agreement about the knowledge they borrow from each other, translation may be relatively effortless. In this sense, Gabriel (2002) used the metaphor of a cooking recipe which constantly changes form as it passes through the hands of actors with different backgrounds and motivations. To give some examples, studies in strategy-as-practice show that each time managers adopt a new tool, model or theory, regardless of whether it comes from academics or other practitioners, they transform it according to their own needs and understandings. For instance, Zbaracki (1998) studied Total Quality Management (TQM) implementation practices in five different organizations, from hospitals and hotels to manufacturing organizations and showed that managers' personal experiences (i.e. stories of war, stories of success and stories of uselessness) gradually substituted for the assumptions of the original model, becoming new versions of TQM. In the same way, academics intending to publish about TQM arguments in academic journals are subjected to the criticisms of peers before their work is accepted (Frodeman, 2014). An interesting study by Bedeian (2004) suggests that the requests of editors and reviewers during the journal review process can lead authors to modify their knowledge claims so drastically that by the time they achieve publication authors hardly recognize their own works. Czarniawska and Sevon (2005) use the metaphor of a children's game to describe this process: Words are conveyed in whispers from one child to another until the chain collapses in laughter at the distortion to what the first child originally whispered. However, since many changes occur without others' being aware, it is unlikely that anyone in the chain will be penalized for progressively distorting knowledge. Based on these findings, we suggest that at least two relevant mechanisms explain how ideas transform as they travel between academics and practitioners: fitting -adapting the theory to suit the context- and retrofitting -adapting the context to suit the theory. Analyzing Michael Porter's concept of competitive strategy, Nicolai (2004) shows that the author merged excerpts from different theories such as 'competitive advantage' and '5-Forces' which he manipulated around managerial practices and success stories to create the impression of a perfect fit. Ironically, practitioners also perform reverse retrofitting, in this way validating Porter's perfect match model time after time.

All in all, legitimation is one of the most diffused academic-practitioner boundary spanning situations, and in contrast to what incompatibility positions sustain, it has a high likelihood of success because it implies a low degree of relational intensity. As long as academics and practitioners are not accountable to each other, they can reconfigure each other's knowledge according to their own legitimation purposes and make as many adjustments as necessary to keep knowledge traveling between them (see also Czarniawska & Sevon, 2005; Klein, 2015).

4.2. Mobilization-based boundary spanning– 'more credible than if we acted alone'

Through mobilization-based boundary spanning, academics and practitioners may become allies to achieve individualistic goals in their communities of reference. Such relations are usually unbalanced at the start because one actor is actively seeking services from or providing services to the other; however, they may evolve into more complex and egalitarian exchanges due to the changing socio-economic context (Frodeman, 2014). To show how mobilization works, and how it differs from the previously described legitimation strategy, we take the case of corporate social responsibility (CSR). According to Gond and Crane (2010) and Brès and Gond (2014), both academics and practitioners are strongly biased toward the search for a positive relationship between CSR and corporate performance, and do their utmost to show to relevant stakeholders that this relationship exists (i.e. legitimation through fitting and retrofitting). The authors argue also that to better serve the legitimation purpose, a complete CSR industry has developed around the ideal of a perfect correlation between CSR and corporate performance (i.e. mobilization). This industry encompasses a wide range of practices such as social ratings and certification performed by external agencies, CSR reports released by corporations, teaching and consulting services offered by expert consultants and academics, and policies and protocols created by governments. By *mobilizing* each other (i.e. 'buying' and 'selling' services to each other), CSR academics and practitioners appear more rigorous, and thus achieve greater credibility than if they acted alone. Yet, as the relationship evolves, roles can change and require increasing negotiation about what CSR is, and how it can be implemented (Brès & Gond, 2014). In the following, we refer to two well-known cases of academic-practitioner client-supplier roles which have evolved recently into more effortful relations: business education and management consulting.

As competition from consultants and management guru increases, and public support for research and education continues to decline, the roles of academics and practitioners in the classroom are also changing to become more contested and uncertain. On the one hand, academics devote increasing time and effort to satisfying the changing needs of business school customers. On the other hand, management practitioners appear increasingly critical and selective about academia's educational offers (Engwall et al., 2016; Frodeman, 2014; Gioia & Corley, 2002; Pfeffer & Fong, 2002, 2004). For instance, Ungureanu and Bertolotti (2018) show that executive education programs are plagued with academics' and practitioners' insecurities about their relationships which they try to lower at all costs. Since traditional teacher-student roles often fail, they are likely to adopt more effortful strategies such as switching student-teacher roles, or suppressing teacher-student differences to achieve freedom and equality in the classroom (for a discussion of the risks and dangers of transdisciplinary classrooms see also (Fuller & Söderlund, 2002; Lyall & Meagher, 2012).

Management consulting has become a very mature and sophisticated market in which client and supplier roles have become indistinct, and more interdependent (Mantere & Vaara, 2008; McKenna, 2006). For instance, to protect themselves from the unwanted risks and anxieties related to adopting complex managerial tools, managers increasingly are hiring external experts from academia or consultancies (Boland, 1993; Cabantous & Gond, 2011; Jarratt & Stiles, 2010; Zbaracki, 1998). In the case that managers called on external consultants to implement TQM solutions (Zbaracki, 1998), this resulted in the creation of new organizational departments which required evermore investment and expert advice. On the other side, not only are some academics building an

identity in business schools based on specialization in managerial consultancy but also business schools increasingly are assessing their employees based on the social and financial capital that their consulting brings to the school (Carton & Ungureanu, 2018).

Based on these arguments, we argue that mobilization of relations in both management education and consulting may require a higher relational effort than legitimation for effective collaboration.

4.3. Enactment-based boundary spanning– 'how can we make this work together?'

Enactment-based boundary spanning is a strategy that entails the 'ultimate' degree of co-ordination in trans-epistemic networks because it requires the highest level of relational effort (Balsiger, 2004; Funtowicz & Ravetz, 1993; Wickson et al., 2006). According to Mobjörk (2010) these relations differ from legitimization and mobilization in several ways. First, enactment implies transition from dual to multi-actor relationships to include institutions, government agencies and policy makers. Second, enactment networks usually are created as cross-sector partnerships which deal with 'grand challenges' -i.e. vast and ambiguously defined problems that go beyond the capabilities of single partners such as rapid demographic change, social responsibility and sustainable energy production to name a few (Dinges et al., 2018; Selsky & Parker, 2005). Third, while the legitimation and mobilization strategies imply that academics' and practitioners' interests remain different even when they intersect, cross-sector partners must negotiate and channel their respective interests toward the common goal (i.e. the grand challenge) (Balsiger, 2004; Banks et al., 2016; Klein, 2015; Selsky & Parker, 2005).

We submit that enactment strategies appear the most promising but also the most complex and fragile types of boundary spanning between management academics and practitioners (Funtowicz & Ravetz, 1993). On the one hand, integrated knowledge production allows academics and practitioners to increase the robustness of their knowledge, broaden the spectrum of issues addressed, correct decision-making biases, engage in more effective learning or even create new social capital (Balsiger, 2004; Buanes & Jentoft, 2009). On the other hand, enactment networks are marked by irreducible complexity, deep uncertainty, value dissent, high stakes and decision-making urgency (Ansell, Boin, & Keller, 2010; Dankel, Vaage, & van der Sluijs, 2017; Funtowicz & Ravetz, 1993). From this perspective, enactment differs from the engaged scholarship paradigm of the theory-practice debate (see Amabile et al., 2001; Van de Ven, 2007) because it postulates that conflict and collaboration run in parallel, making collaboration effortful and outcomes very difficult to predict.

The high relational effort usually required in enactment projects can be explained by several factors, addressed by studies of cross-sector collaborations (Austin & Seitanidi, 2012; Selsky & Parker, 2005). First, the grand challenges tackled in such projects are purposely kept ambiguous so that a plurality of actors feels motivated to participate. However, this requires significant effort on the part of participants to clarify, reformulate and negotiate the problem as the project evolves. When these efforts are successful, the partnership is likely to become stronger and participants more aware of their common mission. If unsuccessful, conflicts can arise, and projects disintegrate. For instance, participants may develop incompatible expectations about the future of the project, risking to lose control as they experience conflict, lack of motivation or even excessive enthusiasm (see Ansell et al., 2010; Austin & Seitanidi, 2012; Ungureanu, Bertolotti, Mattarelli, & Bellesia, 2019). To protect themselves from rising tensions, partners may invoke jargon, technical terms and professional differences to make themselves obscure (Buanes & Jentoft, 2009). For instance, Selin, Kimbell, Ramirez, and Bhatti (2015) studied the collaboration dynamics in the 2014 Oxford Futures Forum, a triennial meeting with academic-practitioner collaboration. They showed that the Forum cultivated interpersonal and cross-disciplinary learning, insights and experimentation but also produced unexpected tension and repulsion as soon as participants were required to collaborate closely (see also Darbellay, 2015; Klein, 2015).

Many measures have been proposed to deal with these issues. There is evidence that an iterative project design and inclusive dialogue generally produce virtuous outcomes such as mutual responsibility, commitment and joint learning among project members (Avenier & Cajaiba, 2012). In the context of the Oxford Futures Forum, for instance, Selin et al. (2015) documented that use of explorative tools such as face-to face play, artefacts and narratives were successful in easing tensions among partners. In other partnerships where interests are too heterogeneous or dispersed problems may be solved by assigning special power to one partner, usually the academic or the policy maker (Polk, 2015).

5. Discussion and concluding remarks

In this study, we proposed an alternative position in the theory-practice debate in management which we call entanglement. Rather than seeking a normative solution to the theory-practice debate, we proposed a set of tools to observe how the relation between theory and practice varies empirically as academics and practitioners relate to each other in the real world. Thus, the entanglement position shifts the paradigm radically. It treats academia and managerial practice not as closed systems with well-defined boundaries, but as trans-epistemic networks connected in at least three inter-dependent ways according to whether academics' and practitioners' goals are different and loosely coupled (legitimation), different but mutually negotiated (mobilization) or shared (enactment). We provided an extended discussion on how the entanglement position integrates and advances pre-existing positions in the debate (see paragraphs 3.6 and 4 above). We would add that identifying boundary-spanning strategies characterized by different relational intensity may help to explain some of the contradictory claims in the theory-practice debate (i.e. the existence of a gap that can or cannot be bridged), and at the same time might contribute to discussions in *Futures* about the variable outcomes of transdisciplinary collaborations. We explained that while some projects allow academics and practitioners to use each other's knowledge without reciprocation (i.e. low-effort boundary spanning based on legitimation), as academics and practitioners become increasingly accountable to each other and interested in securing the same goals, higher boundary spanning efforts are required. We

Table 4
Future research questions from an entanglement perspective.

Boundary spanning strategy	Future research questions
Legitimation	• What conditions must a management concept/piece of knowledge meet to be translatable (fitted and retrofitted) in trans-epistemic networks of interests? -e.g., What types of managerial practices are more likely to be used by academics as sources of legitimation with their peers (fitting)? Are management theories equally suitable for being retrofitted in organizations? • What are the moral determinants and consequences of how academics and practitioners appropriate each other's knowledge when they do not need to interact directly? -e.g., What is the subjective value (i.e., expectations, sensemaking, justifications) of management knowledge that is continuously fitted and retrofitted? • How do management concepts/theories travel in between the two worlds? -e.g., How do meanings and values change while a concept travels across professional communities? • What practical issues do academics and practitioners face when they appropriate each other's knowledge without interacting directly? (i.e., legitimation) -e.g., When and how must academics and practitioners violate internally relevant criteria in the name of legitimation, and how do they justify violations such as fitting and retrofitting to peers? What are the obstacles encountered during fitting and retrofitting?
Mobilization	• What are the current challenges and future trends in management education and consulting work? -e.g., How have management education and business consulting evolved in recent times and which obstacles will they need to overcome in the future to be considered satisficing by management practitioners? • How do business education and consulting work evolve from one-sided supply relations towards more balanced and egalitarian exchanges at the academia-business practice interface? -e.g., How are resistances created and resolved in executive classrooms and in business consulting projects led by academics? How do academics and practitioners traverse competitive and collaborative dynamics in consulting and education projects?
Enactment	• From a process standpoint, what are the affordances and challenges of transdisciplinary multi-actor collaborations that include academics and practitioners? -e.g., How do expectations versus intended and unintended collaboration outcomes shape the way transdisciplinary collaborations evolve through time? How do perceptions of learning benefits versus collaboration costs impact academics' and practitioners' behaviors in transdisciplinary collaboration? • What are the main types of boundary spanning micro strategies enacted by academics and practitioners in transdisciplinary projects, and how do they shape the trajectory of the project itself? -e.g., How do academics and practitioners conduct negotiations as allies/stakeholders of a common project? What are their mutual beliefs and expectations about each other as boundary-spanning professionals? What boundary spanning strategies do they apply? Up to what point are their knowledge frames and practices perceived as congruent and when does the rhetoric of incompatibility enter in use? How are tensions and conflicts managed during collaboration time? • In which cases does face-to-face negotiation (meetings, discussion forums) lead to simplification or to complexification of relations in transdisciplinary projects? -e.g., How do partners manage unexpected events in the collaboration? How do they decide when to continue sponsoring a project via dialogue and conflict negotiation and when to downscale its purpose and/or delegate decision making to one partner or a sub-coalition of partners? • From a transdisciplinary standpoint, how do interdependencies of academics and practitioners with the other partners in the project (policy makers, project funders, funding institutions, civil society, etc.) influence the way management knowledge is used in transdisciplinary project?

have argued that situations of interdependence are on the rise in globalized and informatized knowledge societies. However, we suggested also that being increasingly interconnected does not necessarily imply more fruitful exchanges or more valuable knowledge but rather that academic-practitioner relations are diversifying into multiple forms that need further investigation in order to foresee the future of the theory-practice debate. Thus, we proposed relational intensity as a new explanation for what makes an academic-practitioner exchange easy, difficult and/or impossible to achieve, as well as being a predictor for the (positive and negative) consequences of the exchange. Below, we discuss in which ways the entanglement perspective, and the idea of varying relational effort, could set a new research agenda for the debate; Table 4 summarizes the main research questions that emerge from our theorization.

Regarding the legitimation strategy, we suggest that in contrast to previous arguments its probability of success should not be the main concern. The evidence suggests that if academics have opportunistic reasons to propose a new theory or model to practitioners, and if practitioners have opportunistic interests for its adoption, they will rarely be discouraged by misfits and inadequacies (Jarzabkowski & Kaplan, 2015). Then the question that rises is about the value of the knowledge produced by academics and practitioners through continuous fitting and retrofitting. While for the incompatibility positions legitimation efforts are 'superficial' or 'unhealthy' (Daft & Lewin, 1990; Ghoshal, 2005), from an entanglement standpoint they are unavoidable consequences of trans-epistemic relations in which knowledge must travel rapidly and undergo continuous transformations. However, even were we to agree that the value of knowledge is often in the eye of the beholder (Schatzki, 2001), we might still need to question the moral and practical issues related to academics and practitioners not being directly accountable to each other. It is important to understand how academics and practitioners justify fitting and retrofitting practices to themselves and to their peers, what subjective values they attach to such practices and to what extent they present them as right, necessary or (un)ethical.

Relatedly, it will be important to establish how management concepts change while they travel down the whispered 'telephone

chain' described by Czarniawska. For instance, Erlingsdottír and Lindberg (2005) argue that the actors may give very different names to the same concept or may keep the name of a concept invariant and play with what they mean by it as often happens in the case of with buzzwords such as corporate social responsibility, TQM, open innovation and knowledge management. Studying new waves of fashions and fads in academia and business practice can provide insights into whether the two worlds are converging or diverging in terms of knowledge interests (Czarniawska & Sevon, 2005).

Concerning the mobilization loop, reaching a better understanding of the theory-practice relation implies understanding who allies with whom, under what terms and for what purposes. We still know little about how business education and consulting work are transforming from one-sided supply relations to more egalitarian and mutually beneficial relationships. Given the increasing dissatisfaction with the status quo, an important future direction regards the changing expectations about education and consulting. While traditional consulting and education have suffered from highly structured approaches, flexibility and openness seem key words for the future (Czarniawska, 2001; Pfeffer & Fong, 2004; Ungureanu & Bertolotti, 2018). Specifically, as the management field becomes a market for trans-epistemic bargaining, academics will need to learn multiple education and consulting languages and use them proficiently in relations with increasingly demanding clients. Similarly, as managers become more adept at to navigating different worlds in search of self-legitimating knowledge, they may increasingly think of themselves as experts across disciplines and be more selective about the knowledge offers they receive (see Czarniawska, 2001; Roth et al., 2017; Walsh et al., 2006). So far, there are no studies looking at how academics and practitioners acquire new trans-disciplinary capabilities, and how the interactions with others support or constrain them in the process (Darbellay, 2015).

We showed also that enactment strategies generate highly uncertain outcomes. Despite extended discussion on the promises and disillusions of transdisciplinary projects, we still know very little about what happens in these projects at the micro level, and how the institutional frames in which projects are created shape the boundary spanning mechanisms enacted by individuals at the micro level (Buanes & Jentoft, 2009). For instance, to understand why some transdisciplinary projects survive and other fail miserably, we need to understand how academics and practitioners ultimately become the stakeholders in complex projects in the first place, whether they proactively search for each other and choose to collaborate, or whether they are brought together by other actors such as policy makers or innovation brokers (Ansell & Gash, 2008). In other words, we need to study how academic-practitioner interactions are shaped by interdependencies with other involved actors such as policy makers and project funders.

In addition, findings on transdisciplinarity and cross-sector partnerships could open new research directions at the micro level such as studying intended and unintended collaboration results and comparing learning benefits and collaboration costs in multi-stakeholder projects. This implies the need to investigate academics' and practitioners' mutual beliefs and expectations about each other, and their understanding of their roles and responsibilities as boundary-spanning professionals (Ungureanu and Bertolotti, 2016; Ungureanu et al., 2018; Wickson et al., 2006). Last, it is important that transdisciplinarity is investigated as a process rather than as an outcome (Mitchell, Cordell, & Fam, 2015; Polk, 2015; Waehrens & Riis, 2010). Future studies should acquire in-depth understanding of the types of tensions, conflicts or even crises emerging across the lifecycle of transdisciplinary collaboration, for instance investigating whether academics and practitioners become more able boundary spanners once they acquire experience in joint projects (Ansell et al., 2010; Mitchell et al., 2015).

Perhaps one of the most important directions for future research are the relationships among legitimation, mobilization and enactment. To further integrate the positions in the theory-practice debate, future research could explore when academics and practitioners settle for legitimation, and when they opt for mobilization or enactment. For instance, academic-practitioner exchanges might follow a trial and error process in which the parties start with the least effortful strategy (i.e. legitimation), and only if it proves insufficient do they move on to the more effortful strategies. Alternatively, they might engage simultaneously in all three strategies – perhaps depending on their career stage (see Carton & Ungureanu, 2018).

Finally, the fundamental question that arises from the entanglement position is whether we should reconsider the theory-practice dichotomy using a more comprehensive framework, or whether we should abolish it completely. Seeing each other as tangled within trans-epistemic networks instead of being in opposite far-away worlds might be the first step toward learning about viewpoints different from our own, becoming aware that similar practices are enacted elsewhere or discovering that people we once considered outsiders could become our allies. While on its own, this perspective may not avoid potential misunderstandings between the two worlds, it is hoped that it will enable much-needed integration.

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