RTICLE IN PRESS

European Management Journal xxx (2016) 1-9



Contents lists available at ScienceDirect

European Management Journal

journal homepage: www.elsevier.com/locate/emj



Reframing the relevance of research to practice

Stephen Fox ^a, Stefan N. Groesser ^{b, *}

- ^a VTT, Technical Research Centre of Finland, Vuorimiehentie 3, P.O. Box 1000, Espoo FI-02044, Finland
- ^b Bern University of Applied Sciences, School of Management, Brueckenstrasse 73, 3005 Bern, Switzerland

ARTICLE INFO

Article history: Received 8 January 2016 Received in revised form 29 April 2016 Accepted 25 July 2016 Available online xxx

Keywords: Relevance of research Theory and practice Applied research Complexity

ABSTRACT

We explain that the extant framing of research relevance is skewed because it is centred upon irrelevance of much research knowledge to practitioners, while excluding or under emphasising the irrelevance of much practice knowledge to practitioners. Moreover, the current framing is skewed because the extant literature disregards the very common collaboration between researchers and practitioners. In addition, we explain that the current framing of research relevance is indistinct because theory, practice, and relevance are discussed in vague terms rather than specific terms. Furthermore, the current framing of research relevance is indistinct because there is little reference to theory knowledge. We argue that current skewed and indistinct framing obscures the complexity of relevance. As a result, overly simplistic assertions have been made about how relevance can be increased. We broaden and balance the framing of research relevance. We provide greater specificity in the explanation of factors that contribute to the complexity of relevance. We provide recommendations for addressing the complexity of relevance.

© 2016 Elsevier Ltd. All rights reserved.

1. Introduction

Limited application of research by practice is a recurring and prominent topic in academic literature about management (Anderson, Herriot, & Hodgkinson, 2001; Bartunek & Rynes, 2010; Beer, 2001; Van de Ven & Johnson, 2006; Walsh, Tushman, Kimberly, Starbuck, & Ashford, 2007). Over more than three decades, both researchers and practitioners have argued that practitioners cannot use or do not use research insights about management (Bennis & O'Toole, 2005; Van de Ven, 2002). Indeed, it has been argued that scholars have not done enough to assist organizations improve their management practices (Garvin, 2013). Furthermore, it is argued that theories emerging from business schools may destroy good practice (Ghoshal, 2005).

In recent years, recommendations have been made to make management research more relevant to management practice. These have included encouraging researchers to increase engagement more with practitioners, and for researchers to be more proactive in their choices of research topics (e.g., Corley & Gioia, 2011; Van de Ven & Johnson, 2006). Despite the literature concerning the lack of research relevance to practice being voluminous,

* Corresponding author. (S.N. Groesser).

it has not yet addressed the complexity of relevance. In particular, the perceived relevance of information from any source is dependent upon complex paths that are affected by hard to predict interrelated factors such as culture, personality type, past experience, group think, and task overload (Ariely, 2008; Kahneman, 2011; Voss, Rothermund, & Brandtstädter, 2008).

In this paper, we introduce a fundamental shift in the scholarly debate concerning research relevance: a shift from over simplification to consideration of complexity. Firstly, we broaden and balance the framing for the debate by setting the irrelevance of many research findings alongside the irrelevance of practice information. Secondly, we provide greater specificity through consideration of complex relevance paths that are affected by hard to predict inter-related factors. Lastly, we provide recommendations for increasing research relevance.

We structure the remainder of this paper by first providing definitions of principal terms. Subsequently, we describe the current skewed and indistinct framing of the inter-relation between research and practice. Next, we introduce reframing of research relevance that is more balanced and provides greater specificity. Then, we provide recommendations for addressing the complexity of relevance. Finally, we discuss implications of improved framing.

2. Definitions

Framing draws attention to certain aspects of a topic, while

http://dx.doi.org/10.1016/j.emj.2016.07.005 0263-2373/© 2016 Elsevier Ltd. All rights reserved.

Please cite this article in press as: Fox, S., & Groesser, S. N., Reframing the relevance of research to practice, European Management Journal (2016), http://dx.doi.org/10.1016/j.emj.2016.07.005

E-mail addresses: stephen.fox@vtt.fi (S. Fox), stefan.grosser@bfh.ch

excluding or under emphasising other aspects. Framing is crucial because the framing of options affects evaluations and decisions. For example, positive evaluations are more likely when options are framed in positive terms, and an option is more likely to be chosen when described as an opportunity, rather than as a threat (De Martino, Kumaran, Seymour, & Dolan, 2006; Kahneman & Tversky, 1984; Nelson & Oxleya, 1999). What lies within the scope of framing can be described by recurring scripts that rely upon vague oversimplifications (Garton, Montgomery, & Tolson, 1992; O'Loughlin, O'Tuathail, & Kolossov, 2004). These scripts are used repeatedly to communicate the dominant perceptions of those who frame. Scripting is common in, for example, innovation hype and political campaigning (Boer, Rip, & Speller, 2009; Esser & D'Angelo, 2003; Gardner & Avolio, 1998). In law, logic and philosophy vague descriptions of any topic are considered to be unspecified. The reasoning for this is that no amount of conceptual analysis or empirical investigation can determine whether a vague description is appropriate in a particular situation (Sorensen, 2006; Varzi, 2006).

Within this paper, research information is defined as, information that results from scientific research investigating underlying factors in management phenomena. By contrast, practice information is defined as information about events observed by practitioners during management work. These can exist along a continuum ranging from a report of longitudinal scientific research in a leading scientific periodical to a spontaneous short post on a company web site (Pettigrew, 1990; Venkatesh & Davis, 2000).

There are not set divisions between management scholars and management practitioners. Instead, during portfolio careers, people can spend some time working as management scholars, as management consultants, and as management practitioners (Platman, 2004). Furthermore, management scholars and management practitioners are not dependent upon each other for the production of useful information. For example, there is abundant scientific research in perception, cognition, and physiology that can be applied to management matters such as layout of office space for personnel productivity and satisfaction (Maher & Von Hippel, 2005). Additionally, office equipment companies may conduct surveys concerning consequences arising from different types of office layouts (Landau, 2014). Hence, motivations for the production of research information and practice information can vary (Stokes, 1997) from pure basic research (e.g. brain science), useinspired basic research (e.g. environmental psychology), pure applied research (e.g. seating ergonomics), exchange of bad practice experiences (e.g. office layout and increased absenteeism), exchange of good practice experiences (e.g. office layout and increased creativity), and even self-promotion (Clark, 2011). Both research information and practice information can inform theory development: for example in theories of practice (Warde, 2005).

There can be reciprocal evolution between research information and practice information. In the 1930s, for example, Kurt Lewin introduced a conceptual framework for analysing complex forces in the field of change (Lewin, 1933; 1943). During subsequent decades, Lewin's force field analysis became popular with management consultants who applied it along with management practitioners. This has led to there being many practitioner cases involving Lewin's framework. Now, a new generation of management researchers is seeking to draw attention back to some forgotten details of Lewin's original work (Swanson & Creed, 2014). This example illustrates that research rigour and practitioner relevance can involve reciprocal evolution over time.

According to the Merriam-Webster Dictionary, something is relevant if it has significant and demonstrable bearing on the matter at hand. Little, if any, information can have significant bearing all of the time. Rather, only minimal information can have

significant bearing on the specific matter at hand in each management situation as it arises. The elusiveness of relevance is well illustrated, for example, by health warnings on cigarette packets. These are based on decades of research, and they are expressed in clear language. However, millions of smokers are not influenced by them (Munafò, Roberts, Bauld, & Leonards, 2011). Thus, whether somebody judges information to be relevant is dependent upon complex paths of perception and cognition that are affected by hard to predict inter-related factors such as culture, personality type, past experience, group think, and task overload (Ariely, 2008; Kahneman, 2011; Voss et al., 2008). As explained in the subsequent sections, we address two research questions. First, what are the characteristics of current framing? Second, how can the current framing be improved upon?

3. Current framing of inter-relationships between research and practice

We provided a review of the current literature. From this we explain how the current framing of the inter-relation between research and practice is skewed, indistinct, and lacks specificity. Together, these characteristics hinder improved understanding of the complexity of relevance.

Skewed Framing. The current framing of the debate on the inter-relation between research and practice is skewed because it centres upon irrelevance of research knowledge to practitioners, while excluding or under emphasising the irrelevance of practice knowledge to practitioners (e.g., Corley & Gioia, 2011; Van de Ven & Johnson, 2006). As was previously mentioned, minimal, management knowledge can have significant bearing all of the time. Expert managers, like all experts, have an intuitive grasp of situations based on deep tacit understanding and make reference to external sources only in the occasional situations that are exceptional to their experience. Hence, expert managers do not make references continually to external explicit knowledge sources — no matter how easily accessible they may be (Dreyfus & Dreyfus, 1986; Lin, Schwartz, & Bransford, 2007).

Additionally, the current framing is skewed because the extant literature disregards the very common, well-established, collaboration between researchers and practitioners. For example, around the world, there are frequent calls from funding institutions for research project proposals that depend upon close collaboration between researchers and practitioners. Funding institutions are increasingly insistent upon the need for research to have a positive measurable impact for practice. Moreover, funding institutions seek novelty in research proposals, because they cannot justify perpetual funding of the same research topics. Thus, the notion that much of collaborative research is not already prescient (Corley & Gioia, 2011) overlooks the policies of funding organizations. In addition, research groups are engaged directly in contract research for non-academic organizations. Furthermore, university professors are requested regularly by practitioners to provide expertise for their organizations through consultancy. Although not every non-academic organization is participating in collaborative research, academics are already overloaded with having to secure collaborative research funding, execute collaborative research, and disseminate or exploit collaborative research findings. Participation of more practitioners would require the number of academics to be increased, which in turn would require an increase in the publicly financed portion of research funding (Gibbons, Limoges, Nowotny, Schwartzman, Scott, & Trow, 2010; Miller, Taylor, & Bedeian, 2011; Swain, 2013). Thus, when scholars make what they believe to be novel recommendations for researchers and practitioners to engage with each other in the production of knowledge, such as relational scholarship (Bartunek, 2007), engaged scholarship (Van de Ven, 2007), and evidenced-based management (Briner, Denyer, & Rousseau, 2009), they exclude or under emphasise much of the routine collaboration between researchers and practitioners that is already happening.

Indistinct Framing. The current framing of inter-relationships between research and practice is indistinct because of the vagueness of its scripts. In particular research, practice, and relevance are discussed in vague terms rather than specific terms. For example, categories of theory are not related to categories of practitioner expertise. Categories of theory include: macro-level, meso-level, and micro-level, descriptive, explanatory, predictive, and prescriptive (Gregor, 2006; Rescher, 2000). Categories of practitioner expertise range from novices, who need to learn basic knowledge, to experts who originate new knowledge (e.g. Dreyfus & Dreyfus, 1986). Consider, for example, a descriptive formulation from a macro-level theory, transaction cost theory; people begin to organise their production in firms when the transaction cost of coordinating production through the market exchange is greater than within the firm (Williamson, 1981). Such theoretical knowledge may be interesting to a novice undertaking a course of examined study, however, less interesting to an expert manager who has decades of successful experience in deciding when to buy and when to make.

The current framing of inter-relationships between research and practice is further indistinct because the authors of its scripts make minimal reference to theory knowledge. For example, in Van de Ven and Johnson's AMR paper Knowledge for Theory and Practice (2006), relevance is discussed repeatedly, but there is no reference to, e.g., Relevance Theory (Sperber & Wilson, 1987; 2004). In the AMP paper "Bridging the Research-Practice Gap" (Bansal, Bertels, Ewert, MacConnachie, & O'Brien, 2012), intensive efforts are reported to improve the representation of findings, however, there is no mention of relevant predictive theory such as Cognitive Fit Theory. This theory facilitates prediction of when specific formats (e.g. diagrams, tables) will be a better or worse cognitive fit for a particular management task (Vessey, 1991). Thus, it provides far greater specificity than advice such as; employ visual artists to make the presentation of research findings more interesting (Bansal et al., 2012). Generally, the work of scholars that is focused on the challenges of transferring theory to practice is often ignored. For example, the scientific periodical "Theory to Practice" has more than fifty volumes, yet the insights of its authors have not been considered (Hoy, Davis, & Anderman, 2013).

Limited Explanation. The lack of balance and specificity limits consideration of relevance to overly simplistic assertions about how relevance can be increased. These assertions assume flat ontology that reduces the reality to a conjunction of cause with effect, with little regard for the mechanisms that could link them (Joseph, 1998). In doing so, they exclude the complex interactions between the diverse factors that can facilitate or impede relevance.

Consider, for example, a debate about the methodological soundness of scholars' research and the relevance attributed to their research by managers. This rigour-relevance debate is a recurring theme in discussions concerning gaps between research and practice, which often turns into simplistic either-or arguments (Gulati, 2007; Lorsch, 2009). As outlined above, proposals for addressing increasing relevance without compromising relevance can also be simplistic. For example, a recent review (Bansal et al. 2012) on the theory-practice gap highlights three approaches: Evidenced-based Management, Engaged Scholarship, and Relational Scholarship.

Evidence-based management assumes that "better, deeper logic and employing facts to the extent possible permits leaders to do their jobs better" (Pfeffer & Sutton, 2006, p. 12). This is because of an assumption that better evidence causes the effect of better

decisions (Briner et al., 2009). However, better evidence does not necessarily lead to better decisions. For example, different styles of communication can limit understanding of the evidence (e.g., Kristof, 2014; McKelvey, 2006; Schön, 1983; Van de Ven & Johnson, 2006) and time pressures can have negative effects on the decisions being made (Khaneman & Tversky, 1979; Lauriola, Panno, Levin, & Lejuez, 2014).

Engaged Scholarship advocates that researchers and practitioners collaborate across the basic stages of the research process, including formulating problems, building theory, designing research, and solving problems to investigate complex managerial problems. If this is declared, it offers a fundamental shift in how scholars define their relationships with the communities in which they are located (Bansal et al., 2012; Van de Ven & Johnson, 2006; Van de Ven, 2007). Relational scholarship (Bartunek, 2007; Rynes, Bartunek, & Daft, 2001) advocates that more attention is paid to the interface of research and practice, while recognizing that each has its own community of practice (Wenger, 1998). Bartunek (2007) envisages academic-practitioner conversations happening as a matter of course, enlivening both research and practice, without either community casting its own world aside (Bansal et al., 2012). However, the recommendations of the Engaged Scholarship and Relational Scholarship both overlook that such collaborative activities are routine in the formulation of joint research proposals and the execution of joint research projects. Moreover, they both pay insufficient attention to the complex paths that lead to different people having different perceptions of the same situation and responding differently to that same situation (Ariely, 2008; Hiller & Hambrick, 2005; McKelvey, 2006).

4. Reframing of inter-relationships between research and practice

We introduce a reframing of inter-relationships between research and practice that is balanced and provides greater specificity. We introduce a diagrammatic model of this reframing. We explain why this new framing is a needed starting point for addressing the complexity of relevance.

4.1. Detailed explanation

In Fig. 1, we introduce a diagrammatic model of the new framing. This figure illustrates how increased balance between considerations of research knowledge, paired together with increased specificity, better enables improved explanation of the complexity of relevance. We do not seek to assert that this diagrammatic model provides a full and final description of the complexity of relevance. It is neither an action theory (Ajzen, 1991) nor a theory of decision making (Kunc & Morecroft, 2010). Rather, it provides an overview of key constructs, which are *italicized* in the following explanatory text.

4.2. Required knowledge, current knowledge, and perceived gap in personal knowledge

Each management task can have different required task knowledge. For each management task, a manager can have a perceived gap in personal knowledge. This can depend upon their current personal knowledge and many perceptual factors. These can be categorized as situational factors and personal factors. For example, managers' personal hubris can lead them to believe that the do not have any gaps in their knowledge when they encounter management situations. Consequently, they may think that they do not need to draw upon any extraneous knowledge sources. This is more likely among expert managers who hold senior positions, and less

S. Fox, S.N. Groesser / European Management Journal xxx (2016) 1-9

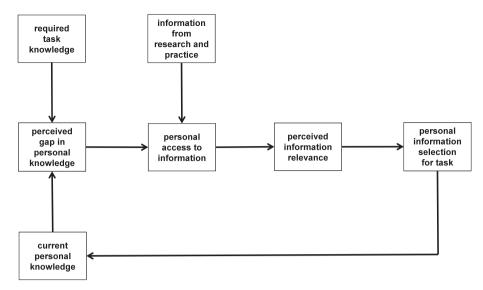


Fig. 1. Factors that influence the complexity of relevance.

likely among novice managers who hold junior positions (Hiller & Hambrick, 2005). With regard to situational factors, cultural reminders, cognitive overload, frequent distractions from high ambient noise etc., can lead to perceptions being based more on culture and groupthink rather than current information (Janis, 1971). An example is the influence of culture being amplified when people anticipate that they will have to explain why they have made a decision (Briley, Morris, & Simonson, 2000; Chiu, Morris, Hong, & Menon, 2000). Together, situational factors and personal factors can result in people considering that, a wide variety of many new tasks are the same as a few old tasks - that can be addressed through their existing knowledge base (Cohen, 1982; Mello, 1992).

4.3. Information from research and practice

As summarized in Fig. 1, information from management research initiated by scholars does not increase in isolation. At the same time, collaborations are initiated by practitioners when, for example, practitioners seek consultancy from university professors. Moreover, there is a constant increase in the amount of practice-based information becoming available. This information is produced, for example, by business leaders and their ghost-writers, by the staff of professional magazines, newspapers, television stations, and radio stations. Additionally, by members of professional institutions and organizations offering professional competence training courses. The information may be communicated via direct mail posting of magazines, meetings of professional institutions, professional competence training courses, websites of professional institutions, and emailed newsletters.

The ever increasing information is driven by the variety of management situations increasing. This is due to, for example, the increasing variety of stakeholders and objectives involved in the operations of organizations. Examples are the increasing level of internationalization and depth of organisational structures (Nell & Ambos, 2013); increasing complexity in value networks (Gretzinger & Royer, 2014); corporate responsibility (Bondy & Starkey, 2014; Mayes, Pini, & McDonald, 2013); or environmental sustainability (Dangelico, Pontrandolfo, & Pujari, 2013). As summarized in Fig. 1, new methodologies, new techniques, and new technologies can accelerate and increase the production of new knowledge: e.g., neuro-research (Becker, Cropanzano, & Sanfey, 2011; Lee, Senior, &

Butler, 2012) or big data (Bharadwaj, Sawy, Pavlou, & Venkatraman, 2013; Davenport, Barth, & Bean, 2012; Ross, Beath, & Quaadgras, 2013). Thus, *information from research and practice* are continually increasing.

4.4. Personal access to information

As illustrated in Fig. 1, the information from research and practice that is perceived to be relevant is drawn from information that is accessible ("personal access to information"). Both new research findings and new practice information accessibility can depend upon many factors. First, much of the most widely disseminated knowledge about management is written first in the English language, and may never be translated into the majority of the world's languages. Second, many managers continue to live away from physical sources of management information, such as the libraries of universities and institutions, combined with poor Internet access, away from digital sources, such as journal websites, the Management Innovation Exchange, etc. Third, organization type can affect accessibility. For example, if practitioners work for large organizations that have mandatory training, and/or if they are members of professional institutes, they may have the latest information delivered to them.

Fourth, educational background may affect accessibility. If practitioners have had a higher education in management through university and/or professional education encompassing scientific publications, they may continue with periodicals' email alerts. Also, they may continue to refer to scientific periodicals as part of self-directed lifelong learning. By contrast, if practitioners have not been introduced to scientific periodicals through formal education, they are much less likely to refer to scholarly writings.

Fifth and lastly, peer groups can affect accessibility. For example, self-employed individuals may have few opportunities to access knowledge through peers. By contrast, practitioners who work for large organizations and participate in the events of professional institutes may have frequent contacts with well-informed peers.

4.5. Perceived information relevance

Nonetheless, having access to a wide range of information sources does not inevitably lead to people drawing upon a wide range of information sources. This is because human minds are not empty receptacles that are automatically and equally open to any information from any source. Rather, perceived information relevance influences personal information selection for task. Firstly, managers' hubris can lead them to believe that the do not have any gaps in their knowledge when they encounter management challenges (Hiller & Hambrick, 2005). Additionally, some sources are more dominant than others because they are well matched to the common cognitive bias of loss aversion. This bias makes people more concerned about losses than gains (Khaneman & Tversky, 1979; 1984). This can lead to favouring sources that are perceived to be difficult for others to criticise. These can include international management consultancy firms that promote a succession of management fads (Abrahamson, 1991). Even when the popularity of a particular management fad begins to fade, loss aversion can prevent subsequent criticism of the passing fad. For example, if a practitioner has been a vocal advocate of lean management, they may be unlikely to proselytize the reluctant statement of a lean management guru that lean management is not sufficient for the success of an organization (Womack, 2005).

Next, information access is also diminished by people seeing a wide variety of many new situations as being the same as old situations - that can be addressed through their existing knowledge (Cohen, 1982; Mello, 1992). Furthermore, people can continually refer to the same limited types of information from the same limited sources as they make recurring judgements about new situations that they perceive to be the same as old situations (Atkin, 1985: Blackman & Baird, 2014: Kahan, Peters, Dawson, & Slovic, 2013: Voss et al., 2008). Cognitive Dissonance Theory suggests that decision makers systematically prefer supporting information in order to reduce cognitive dissonance. Individuals will then exhibit confirmatory information tendencies to defend their positions and reach the goal of dissonance reduction (Festinger, 1957; Fischer, 2011). Subsequently, this tendency can be further entrenched when using the web to access information. This occurs when website algorithms selectively guess what information a user would like to see. This automated guessing is based on information about the user's past search history and click behaviour. As a result, users become isolated in their own cultural or ideological bubbles (Boutin, 2011).

4.6. Personal information selection

Personal information selection for task is based on cognitive factors. In particular, within Relevance Theory (Sperber & Wilson, 1987; 2004), a communication is deemed relevant when it connects with other available sources to yield a positive cognitive effect, such as settling a doubt, correcting a mistaken impression, answering a question, and/or improving knowledge on a certain topic (Sperber & Wilson, 1987; 2004). However, as summarized in Fig. 1, and previously discussed, context includes not only the situation, but also self-evaluations, management fads, cultural background, personality type, and past experiences. Such contextual factors can limit the potential for positive cognitive effects from sources of information and information content that are incongruent with self-evaluations, group think, culture, personality type, and positive past experiences. Interacting with sources that are markedly different from us, and exposure to messages that are inconsistent with existing beliefs, causes the uncomfortable psychological state of cognitive dissonance (DeBruine, McPherson, Smith-Lovin, & Cook, 2001; Touhey, 1974).

Within Relevance Theory, what allows a communication to be worth picking out from the mass of competing stimuli is not just the cognitive effects it achieves. The greater the effort of inference required, the less rewarding the input will be to process, and hence the less deserving of attention. Hence, within Relevance Theory, the

greater the processing effort required, the less relevant the communication will be (Sperber & Wilson, 1987; 2004). Efforts of inference are not determined solely by the presentation formats of information. Rather, efforts of inference are based upon our existing beliefs, values, etc., and where information is coming from. Often less cognitive effort is required when information comes from sources that are congruent with our beliefs, values, and even physical appearance (DeBruine, 2002; McPherson et al., 2001; Touhey, 1974).

Therefore, many variables that vary from person to person can affect what individuals and groups define as relevant information and irrelevant information. Different people facing a similar situation can perceive dissimilar information to be irrelevant. This does not conclude that the information perceived to be irrelevant does not have a significant bearing on the matter at hand. Rather, the information is not perceived to have a significant bearing on the matter at hand (Dror, 2010; Freedman, 2010; Oswald & Grosjean, 2004). Consider, for example, Six Sigma. This is a statistical quality management methodology used to identify and reduce variability in processes. It is based on a combination of research knowledge and practice knowledge. It has been directly associated with radical improvements in process performance at many companies (e.g. General Electrics). However, many companies do not apply Six Sigma, just as they do not apply many methods of improving processes and products that are based on combinations of research knowledge and practice knowledge. Instead, methods fall in and out of fashion in accordance with the hype cycles of management fads – not due to analysis by open management minds that are free of all biases (Carson, Lanier, Carson, & Guidry, 2000; Gibson & Tesone, 2001).

5. The baggage of research

As explained above, research findings can be perceived to be irrelevant, practice knowledge can be perceived to be irrelevant, and successful methodologies that are based on the combinations of research and practice knowledge can be perceived to be irrelevant. Nonetheless, as explained in the following paragraphs, new information from research begins the complex journey to perceive relevance burdened with the baggage of being inherently uncertain and apparently redundant.

With regards to inherent uncertainty, in everyday language, theory is synonymous with hypothesis, proposition, supposition, and thesis (Merriam-Webster Dictionary, 2014). These are respectively defined as: an idea that is not proven, but that leads to further study or discussion; a statement to be proved, explained, or discussed; something that is supposed; and a statement that someone wants to discuss or prove. Furthermore, antonyms for theory are assurance, certainty, fact, and knowledge (Merriam-Webster Dictionary, 2014). Thus, within the everyday language of practitioners, theory does not offer certain remedies of what to do in challenging management situations. Rather, theory is awaiting supporting evidence in the world of academia.

Any practitioners who examine theory more closely can find that researchers themselves are grappling with endless uncertainty as they progress from truth approximation to truth approximation, impelled by replication studies yielding inconsistent results (Kuhn, 1996; Tang & Kwan, 1999; Popper, 1974; Qui, Donaldson, & Luo, 2012). For example, Media Richness Theory (MRT) was put forward in The Academy of Management Executive (Lengel & Daft, 1989) as a widely applicable means for managers to determine what communication media are best suited to what communication situations. Yet, the testing of specific MRT hypothesis has revealed that many predictive limitations lie behind the appealing face validity of Media Richness Theory's catchy title (Dennis, Fuller,

& Valacich, 2008).

Compared to the uncertainties of theoretical formulations and research findings, practice information includes the biographies and memoires of famously successful corporate leaders, such as Jack Welch and Steve Jobs. These real-life tales of what to do in complex management situations do not come with intractable uncertainties, but with emphatic examples — straight from the gut (Welch, 2003). Indeed, common among famous corporate leaders, such as Bill Gates, Steve Jobs, Larry Page, Mark Zuckerberg, is lack of management studies and disregard for prevailing thinking. Thus, theoretical information is rendered unnecessary against a background of swash buckling business anecdotes about self-made corporate heroes.

Theoretical information can be rendered irrelevant not only by external comparison but also by the seeming banality of its content. Consider, for example, Expectancy Disconfirmation Theory (Oliver, 1980; Spreng, MacKenzie, & Olshavsky, 1996). Within this theory, it is posited that the consumer is likely to be dissatisfied if a product falls short of expectations. Such theoretical formulations can be perceived to be nothing more than statements of the obvious. Generally, it has been argued that there are three phases in assessments of theory: (i) the theory is not true; (ii) the theory is true, but it is unimportant; (iii) the theory is true, and it is important but we knew it all along (Charlton, 2008). Indeed, the advantages of management theory remain difficult to present as being anything other than superfluous, when it is reported that good management arises from behaviours covered by general training courses, such as good communication and good coaching (Garvin, 2013).

6. Addressing the complexity of relevance

Nonetheless, it is possible for something that could be considered extraneous to be made relevant. For example, luxury marketing is distinguished by making superfluous expensive products seem highly desirable via complex paths from consumer awareness to consumer desire and involvement (Kitson, 1920; O'Cass, 2004; Wijaya, 2012). It is notable that in doings so, luxury brands resolve commercial tensions between rigour and relevance. In particular, luxury brands are committed to remaining true to craft; living up to heritage; focusing on detail and quality; while remaining current (Beverland, 2004; 2005). All of these values are also applicable to management research. The prominent difference between luxury brands and management research is not rigour. It is the understanding of the relentless determination required to make things that people can live without successfully — seem irresistibly attractive.

Today, luxury brands seek to gain positive network effects through the use of multiple channels across both traditional media and digital media. The same multi-channel marketing strategies can be applied by a determined management scholar seeking to spread her/his own name like a brand (Clark & Salaman, 1996; Jackson & Argyris, 2001). In efforts to increase perceived relevance, multichannel brand marketing of themselves by individual researchers can have the potential to overcome the inherent uncertainty of research. This marketing of the researcher, rather than the research can enable consistent messages to be maintained through generations of researcher brand extensions via new books (Aaker & Keller, 1990; Clark & Greatbatch, 2004); and prevent dilution or damage of the researcher's personal brand (Bhat & Reddy, 2001; Chen & Chen, 2000). For example, Tom Peters continued to be successful, despite that companies featured in his best seller, In Search of Excellence, performed badly soon after the book's release (Peters & Waterman, 1982). Similarly, Gary Hamel has continued on a successful path, despite the poor performance of companies that he had lauded, such as Enron (Hindle, 2008).

This determined application of multichannel personal brand marketing could bring the network effect of 'winner-takes-all', where a few big name management scholars dominate managers' attention (Katz & Shapiro, 1994). However, the strategy of relentless self-promotion does not address the complexity of relevance. This is because it can lead to widespread attempts for broad prescriptions, for example as two by two matrices, to be applied to complex situations requiring specific interventions. Therefore, some research findings may be widely referred to, but on many occasions they are referred to when they do not have significant and demonstrable bearing on the matter at hand (Adner, Pólos, Ryall, & Sorenson, 2009; McKelvey, 2006).

Hence, alternatives to the 'winner-takes-all effects' of researcher self-promotion are needed to address the complexity of relevance. Here, we make six recommendations. Throughout, the recommendations draw upon practices of luxury marketing, which go far beyond multiple channel marketing. Additionally, the challenge is for new research to connect with other information sources in such a way as to yield a positive cognitive effect, with the least effort of inference (Sperber & Wilson, 1987; 2004).

Luxury marketing seeks to cultivate discerning customers who can appreciate the inherent characteristics of the highest quality. An analogous opportunity to increase relevance is an education in management that deals with the purpose, nomenclature, and skills of management research — rather than only referring to established management theories. Such education can enable practitioners to understand how investigation of causal mechanisms and contexts can increase predictability amidst disordered, chaotic, real life situations. Moreover, such education can enable practitioners to become more discerning consumers of management research outputs, as their understanding of probabilistic causation enables them to separate hyped management fads from sound management theory (Christensen & Raynor, 2003).

Luxury marketing focuses on personal relationships between experts and consumers, such as between a tailor and a client. Similarly, a second opportunity would be that more organizations directly employ research scientists, who can interface with the research discourse and translate the results to the internal languages of the organizations (Garvin, 2013). Luxury marketing also seeks to bring predictable excellence to consumers through the testing and honing of procedures over generations. Similarly, predictive theory should be drawn upon when communicating research theory and theoretical formulations. For example, Cognitive Fit Theory can better enable information to be designed for reduced effort of inference by matching format to task (Reneau & Blanthorne, 2001; Speier, Vessey, & Valacich, 2003).

Luxury marketing does not propose individual offerings in isolation. Rather, offerings are carefully and clearly related to each other, for example in flagship stores, to provide coherent combined meaning for consumers (Manlow & Nobbs, 2013). Likewise, there is a need for new research findings to be related to each other, and to extant theory, in order to provide coherent combined meaning for practitioners. Consider, for example, the topic of strategy. It has been argued that there are ten separate schools of strategy; environmental, cognitive, entrepreneurial, power, positioning, cultural, planning, emergent, design, transformation; and that the each school represents a partial picture of each strategy (Mintzberg, Ahlstrand, & Lampel, 2009). In luxury marketing, rigorous attention is paid to the details of each component offering, and while at the same time ensuring that the overall meaning is always clear. By contrast, within scholarship overall meaning is left to take shape haphazardly through the different access and different perceptual filters, of different individuals. An alternative would be for scholarly bodies to act as the stewards of overall meaning across the contributions to their fields of authority.

Furthermore, luxury marketing does not leave consumers speculating what might be done with its contributions. Instead, where, when, and how to use its offerings are made clear through co-ordinated illustrative explanations. Practitioners are increasingly using qualitative and quantitative models in order to better determine where, when, and how to take successful management actions (e.g., Osterwalder & Pigneur, 2010; Rosenzweig, 2014). Accordingly, what to do with research outputs could be made clearer to practitioners by relating them to qualitative and quantitative models. In particular, to multi-resolution models that allow for addressing the overall composition of management situations and iteratively drilling down to detailed levels where necessary (Hong & Kim, 2013). Thus, overall meaning across a field could be applied to high level modelling, and individual contributions to detailed levels of modelling.

7. Conclusions

Limited application of research by practice is a recurring and prominent topic in the academic literature about management. Previously, the complexity of relevance has not been addressed, however, the framing of relevance has been skewed and indistinct. Moreover, it has been atheoretical. For example, Relevance Theory, Cognitive Dissonance Theory, and Cognitive Fit Theory have not being included in discussions on this topic. In this paper, we have broadened the framing for the debate and provided greater specificity in the discussion of factors affecting relevance. Drawing upon the practices of luxury marketing, we have provided recommendations for increasing research relevance. These contributions better reveal the formidable challenges involved in increasing the relevance of research to practice. They reveal the determined effort in the thought and action that is required to increase the relevance of research to practice: determined effort in thought and action that is required in addition to the established work of scientific management research. For example, while we have introduced greater specificity into the discussion of factors affecting research relevance, more specificity is needed to determine and map the paths to relevance for different categories of management practitioners. Accordingly, the notion of rigour versus relevance needs to be replaced with the recognition that achieving relevance is dependent upon rigorous thought and action, focused upon addressing the complexity of practitioner situations and perceptions.

Acknowledgements

The research presented in this paper was funded by the European Commission in the context of the Use-it-wisely project, under contract number 609027.

References

- Aaker, D. A., & Keller, K. L. (1990). Consumer evaluations of brand extensions. *Journal of Marketing*, 54(1), 27–41.
- Abrahamson, E. (1991). Managerial fads and fashions: The diffusion and rejection of innovations. *Academy of Management Review*, 16(3), 586–612.
- Adner, R., Pólos, L., Ryall, M., & Sorenson, O. (2009). The case for formal theory. *Academy of Management Review*, 34(2), 201–208.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.
- Anderson, N., Herriot, P., & Hodgkinson, G. P. (2001). The practitioner-researcher divide in Industrial, Work and Organizational (IWO) psychology: Where are we now, and where do we go from here? *Journal of Occupational and Organizational Psychology*, 74(4), 391–411.
- Ariely, D. (2008). Predictably irrational: The hidden forces that shape our decisions. New York, NY: HarperCollins.
- Atkin, C. (1985). Informational utility and selective exposure. In D. Zillmann, & J. Bryant (Eds.), *Selective exposure to communication*. Hillsdale, NJ: Erlbaum.
- Bansal, P., Bertels, S., Ewert, T., MacConnachie, P., & O'Brien, J. (2012). Bridging the research-practice gap. *Academy of Management Perspectives*, 26(1), 73–92.

- Bartunek. (2007). Academic-practitioner collaboration need not require joint or relevant research: Toward a relational scholarship of integration. *Academy of Management Review*, 50(6), 1323—1333.
- Bartunek, J. M., & Rynes, S. L. (2010). The construction and contributions of "implications for practice": What's in them and what might they offer? *Academy of Management Learning and Education*, 9(1), 100–117.
- Becker, W. J., Cropanzano, R., & Sanfey, A. G. (2011). Organizational Neuroscience: Taking organizational theory inside the neural black box. *Journal of Management*, 37(4), 933-961.
- Beer, M. (2001). Why management research findings are unimplementable: An action science perspective. *Reflections*, 2(3), 58–65.
- Bennis, W. G., & O'Toole, J. (2005). How business schools lost their way. Harvard Business Review, 83(5), 96–104.
- Beverland, M. B. (2004). Uncovering theories in Use: Building luxury wine brands. *European Journal of Marketing*, 38(3–4), 446–466.
- Beverland, M. B. (2005). Managing the design innovation-brand marketing interface: Resolving tension between artist creation and commercial imperatives. Journal of Product Innovation Management, 22(2), 193–207.
- Bharadwaj, A. E., Sawy, O. A., Pavlou, P. A., & Venkatraman, N. (2013). Digital Business Strategy: Toward a next generation of insights. *Mis Quarterly*, *37*(2), 471–482.
- Bhat, S., & Reddy, S. K. (2001). The impact of parent brand attribute associations and effect on brand extension evaluation. *Journal of Business Research*, 53(3), 111–122
- Blackman, J., & Baird, S. (2014). The shooting cycle. Connecticut Law Review, 46.
- Boer, D., Rip, A., & Speller, S. (2009). Scripting possible futures of nanotechnologies: A methodology that enhances reflexivity. *Technology in Society*, 31(3), 295–304.
- Bondy, K., & Starkey, K. (2014). The dilemmas of Internationalization: Corporate social responsibility in the multinational corporation. *British Journal of Management*, 25(1), 4–22.
- Boutin, P. (2011). Your Results May Vary: Will the information superhighway turn into a cul-de-sac because of automated filters? *The Wall Street Journal*. May 20.
- Briley, D. A., Morris, M. W., & Simonson, I. (2000). Reasons as carriers of culture: Dynamic versus dispositional models of cultural influence on decision making. *Journal of Consumer Research*, 27(2), 157–178.
- Briner, R., Denyer, D., & Rousseau, D. M. (2009). Evidence-based management: Concept cleanup time. *Academy of Management Perspectives*, 23(4), 19–32. Carson, P. P., Lanier, F. A., Carson, K. D., & Guidry, B. N. (2000). Clearing a path
- Carson, P. P., Lanier, F. A., Carson, K. D., & Guidry, B. N. (2000). Clearing a path through the management fashion jungle: Some preliminary trailblazing. *Academy of Management Journal*, 43(6), 1143–1185.
- Charlton, B. G. (2008). False, trivial, obvious: Why new and revolutionary theories are typically disrespected. *Medical Hypotheses*, 71(1), 1–3.
- Chen, A. C.-H., & Chen, S. K. (2000). Brand dilution effect of an extension failure: A Taiwan study. *Journal of Product and Brand Management*, 9(4), 243–254.
- Chiu, C.-Y., Morris, M. W., Hong, Y.-Y., & Menon, T. (2000). Motivated cultural cognition: The impact of implicit cultural theories on dispositional attribution varies as a function of need for closure. *Journal of Personality & Social Psychology*, 78(2), 247–259.
- Christensen, C. M., & Raynor, M. E. (2003). Why hard-nosed executives should care about management theory. *Harvard Business Review*, 81(9), 66–74.
- Clark, D. (2011). Reinventing your personal brand. *Harvard Business Review*, 9(3), 78–81.
- Clark, T., & Greatbatch, D. (2004). Management fashion as image-spectacle the production of best-selling management books. Management Communication Quarterly, 17(3), 396–424.
- Clark, T., & Salaman, G. (1996). The management guru as organizational witch-doctor. Organization, 3(1), 85–107.
- Cohen, H. (1982). You Can Negotiate Anything: The World's Best Negotiator Tells You How To Get What You Want. New York, NY: Bantam Books.
- Corley, K. G., & Gioia, D. A. (2011). Building theory about theory building: What constitutes a theoretical contribution? *Academy of Management Review*, 36(1), 12—37
- Dangelico, R. M., Pontrandolfo, P., & Pujari, D. (2013). Developing Sustainable New Products in the Textile and Upholstered Furniture Industries: Role of External Integrative Capabilities. *Journal of Product Innovation Management*, 30(4), 642–658
- Davenport, T. H., Barth, P., & Bean, R. (2012). How 'big data' is different. *MIT Sloan Management Review*, 54(1), 43–48.
- De Martino, B., Kumaran, D., Seymour, B., & Dolan, R. J. (2006). Frames, biases, and rational decision-making in the human brain. *Science*, 313(5787), 684–687.
- DeBruine, L. M. (2002). Facial resemblance enhances trust. *Proceedings of the Royal Society B: Biological Sciences*, 269, 1307–1312.
- Dennis, A. R., Fuller, R. M., & Valacich, J. S. (2008). Media, tasks, and communication processes: A theory of media synchronicity. *MIS Quarterly*, *32*(3), 575–600.
- Dreyfus, H. L., & Dreyfus, S. E. (1986). Mind over machine: The power of human intuition and expertise in the age of the computer. New York: The Free Press.
- Dror, I. E. (2010). Combating bias: The next step in fighting cognitive and psychological contamination. *Journal of Forensic Science*, 57(1), 276–277.
- Esser, F., & D'Angelo, P. (2003). Framing the press and the publicity process. *American Behavioural Scientist*, 46(5), 617–641.
- Festinger, L. (1957). A theory of cognitive dissonance. Stanford University Press.
- Fischer, P. (2011). Selective exposure, decision uncertainty, and cognitive economy: A new theoretical perspective on confirmatory information search. *Social and Personality Psychology Compass*, 5(10), 751–762.
- Freedman, D. H. (2010). The streetlight effect. Discover Magazine. August 1.

- Gardner, W. L., & Avolio, B. J. (1998). The charismatic relationship: A dramaturgical perspective. *Academy of Management Review*, *23*(1), 32–58.
- Garton, G., Montgomery, M., & Tolson, A. (1992). Ideology, scripts and metaphors in the public sphere of a general election. In P. Scannell (Ed.), *Broadcast talk* (pp. 100–119). London: Sage.
- Garvin, D. A. (2013). How Google sold its engineers on management. *Harvard Business Review, December*, 75–82.
- Ghoshal, S. (2005). Bad management theories are destroying good management practices. Academy of Management Learning & Education, 4(1), 75–91.
- Gibbons, M., Limoges, C., Nowotny, S., Schwartzman, Scott, P., & Trow, M. (2010). The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies. London: Sage Publications.
- Gibson, J. W., & Tesone, D. V. (2001). Management fads: Emergence, evolution, and implications for managers. Academy of Management Perspectives, 15(4), 122–133.
- Gregor, S. (2006). The nature of theory in information systems. *MIS Quarterly*, 30(3), 611–642.
- Gretzinger, S., & Royer, S. (2014). Relational resources in value adding webs: The case of a Southern Danish firm cluster. *European Management Journal*, 32(1), 117–131.
- Gulati, R. (2007). Tent poles, tribalism, and boundary spanners: The rigor-relevance debate in management research. *Academy of Management Journal*, 50(9), 775–782.
- Hiller, N. J., & Hambrick, D. C. (2005). Conceptualizing executive hubris: The role of (hyper-)core self-evaluations in strategic decision-making. *Strategic Management Journal*, 26, 297–319.
- Hindle, T. (2008). Guide to management ideas and gurus. London: Profile Books Limited.
- Hong, S.-Y., & Kim, T. G. (2013). Specification of multi-resolution modelling space for multi-resolution system simulation. *Simulation*, 89(1), 28–40.
- Hoy, A. W., Davis, H. A., & Anderman, E. M. (2013). Theories of learning and teaching. *Theory into practice*, special Issue: Fifty years of theory into Practice: Learning from the past. *Looking to the Future*, 52(S1), 9–21.
- Jackson, B., & Argyris, C. (2001). Management gurus and management fashions. London: Routledge.
- Janis, I. L. (1971). Groupthink. Psychology Today, 5(6), 43-46.
- Joseph, J. (1998). In defence of critical realism. Capital & Class, 22(2), 73-102.
- Kahan, D. M., Peters, E., Dawson, E. C., & Slovic, P. (2013). Motivated numeracy and enlightened self-government. Yale Law School. Public Law Working Paper No. 307.
- Kahneman, D. (2011). Thinking fast and slow. Farrar, Straus and Giroux Publisher. Kahneman, D., & Tversky, A. (1984). Choices, values, and frames. American Psychologist, 39(4), 341–350.
- Katz, M. L., & Shapiro, C. (1994). Systems competition and network effects. *Journal of Economic Perspectives*, 8(2), 93–115.
- Khaneman, D., & Tversky, A. (1979). Prospect Theory: An analysis of decision under risk. *Econometrica*, 47(3), 263–291.
- Kitson, H. D. (1920). Manual for the study of the psychology of advertising and selling. Philadelphia. J.B. Lippincott Company.
- Kristof, N. (2014). Professors, We need you! The New York Times. February, 15.
- Kuhn, T. (1996). The structure of scientific revolutions. Chicago: University of Chicago Press.
- Kunc, M. H., & Morecroft, J. D. W. (2010). Managerial decision making and firm performance under a resource-based paradigm. *Strategic Management Journal*, 31(11), 1164–1182.
- Landau, P. (2014). Open-plan offices can be bad for your health. *The Guardian*. September 29.
- Lauriola, M., Panno, A., Levin, I. P., & Lejuez, C. W. (2014). Individual differences in risky decision making: A meta-analysis of sensation seeking and impulsivity with the balloon analogue risk task. *Journal of Behavioral Decision Making*, 27(1), 20–36.
- Lee, N., Senior, C., & Butler, M. J. R. (2012). The domain of organizational cognitive Neuroscience: Theoretical and empirical challenges. *Journal of Management*, 38(4), 921–931.
- Lengel, R., & Daft, R. L. (1989). The selection of communication media as an executive skill. Academy of Management Executive, 1(3), 225–232.
- Lewin, K. (1933). Vectors, cognitive processes, and Mr. Tolman's criticism. *The Journal of General Psychology*, 8(2), 318–345.
- Lewin, K. (1943). Defining the 'field' at a given time. *Psychological Review*, 50(3), 292–310.
- Lin, X., Schwartz, D. L., & Bransford, J. (2007). Intercultural adaptive expertise: Explicit and implicit lessons from Dr Hatano. *Human Development*, *50*(1), 65–72.
- Lorsch, J. W. (2009). Regaining lost relevance. Journal of Management Inquiry, 18(2), 108–117.
- Maher, A., & Von Hippel, C. (2005). Individual differences in employee reactions to open-plan offices. *Journal of Environmental Psychology*, 25(2), 219–229.
- Manlow, V. B., & Nobbs, K. (2013). Form and function of luxury Flagships: An international exploratory study of the meaning of the flagship store for managers and customers. *Journal of Fashion Marketing and Management*, 17(1), 49–64.
- Mayes, R., Pini, B., & McDonald, P. (2013). Corporate social responsibility and the parameters of dialogue with vulnerable others. *Organization*, 20(6), 840–859.
- McKelvey, B. (2006). Comment on van de ven and Johnson's engaged scholarships: Nice try, but.... *Academy of Management Review*, 31(4), 822–829.
- McPherson, M., Smith-Lovin, L., & Cook, J. M. (2001). Birds of a Feather: Homophily

- in social networks. Annual Review of Sociology, 27, 415-444.
- Mello, A. (1992). Awareness: The Perils and Opportunities of Reality. New York, NY: Image Books.
- Miller, A. N., Taylor, S. G., & Bedeian, A. G. (2011). Publish or perish: Academic life as management faculty live it. *Career Development International*, 16(5), 422–445.
- Mintzberg, H., Lampel, J., & Ahlstrand, B. (2009). Strategy safari: A guided tour through the wilds of strategic management (2nd ed.). Harlow, UK: Pearson Education Limited.
- Munafo, M. R., Roberts, N., Bauld, L., & Leonards, U. (2011). Plain packaging increases visual attention to health warnings on cigarette packs in non-smokers and weekly smokers but not daily smokers. *Addiction*, 106(8), 1505—1510.
- Nell, P. C., & Ambos, B. (2013). Parenting advantage in the MNC: An embeddedness perspective on the value added by headquarters. Strategic Management Journal, 34(9), 1086–1103.
- Nelson, T. E., & Oxleya, Z. M. (1999). Issue framing effects on belief importance and opinion. *Journal of Politics*, *61*(4), 1040–1067.
- O'Loughlin, J., ÓTuathail, G., & Kolossov, V. (2004). A 'risky westward turn'? Putin's 9–11 script and ordinary Russians. *Europe-Asia Studies*, 56(1), 3–34.
- Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research*, 17(3), 460.
- Osterwalder, A., & Pigneur, Y. (2010). Business model generation: A handbook for visionaries, game changers, and challengers. New Jersey: Wiley.
 Oswald, M. E., & Grosjean, S. (2004). Confirmation bias. In R. F. Pohl (Ed.), Cognitive
- Oswald, M. E., & Grosjean, S. (2004). Confirmation bias. In R. F. Pohl (Ed.), Cognitive illusions: A handbook on fallacies and biases in thinking, judgement andmemory (pp. 79–96). Hove,UK: Psychology Press.
- O'Cass, A. (2004). Fashion clothing consumption: Antecedents and consequences of fashion clothing involvement. *European Journal of Marketing*, 38(7), 869–882.
- Peters, T. J., & Waterman, R. H. (1982). In search of excellence. New York: Harper & Row
- Pettigrew, A. M. (1990). Longitudinal field research on Change: Theory and practice. *Organization Science*, 1(2), 267–292.
- Pfeffer, J., & Sutton, R. I. (2006). Harvard Business Review, 84(1), 62-74.
- Platman, K. (2004). Portfolio careers' and the search for flexibility in later life. *Work Employment & Society*, 18(3), 573–599.
- Popper, K. (1974). Replies to my critics. London: Open Court.
- Qui, J., Donaldson, L., & Luo, B. N. (2012). The benefits of persisting with paradigms in organizational research. Academy of Management Perspectives, 26(1), 93–104.
- Reneau, J. H., & Blanthorne, C. (2001). Effects of information sequence and irrelevant distractor information when using a computer-based decision aid. *Decision Sciences*, 32(1), 145–164.
- Rescher, N. (2000). *Realistic pragmatism: An introduction to pragmatic philosophy*. Albany: State University of New York Press.
- Rosenzweig, P. (2014). The benefits, and limits, of decision models. *McKinsey Quarterly Issue*, 1, 106–115.
- Ross, J. W., Beath, C. M., & Quaadgras, A. (2013). You may not need big data after all. Harvard Business Review, 91(12), 90–96.
- Rynes, S., Bartunek, J., & Daft, R. (2001). Across the great Divide: Knowledge creation and transfer between practitioners and academics. Academy of Management Journal, 44(3), 340–356.
- Schön, D. A. (1983). The reflective Practitioner: How professionals think in action. New York: Basic Books.
- Sorensen, R. (2006). Vagueness. In E. N. Zalta (Ed.), The stanford encyclopedia of philosophy. Stanford, CA: Stanford University.
- Speier, C., Vessey, I., & Valacich, J. S. (2003). The effects of interruptions, task complexity, and information presentation on computer-supported decisionmaking performance. *Decision Sciences*, 34(4), 771–797.
- Sperber, D., & Wilson, D. (1987). Precis of Relevance: Communication and cognition. Behavioral and Brain Sciences, 10, 697–754.
- Sperber, D., & Wilson, D. (2004). Relevance theory. In G. Ward, & L. Horn (Eds.), *Handbook of pragmatics* (pp. 607–632). Oxford: Blackwell.
- Spreng, R. A., MacKenzie, S. B., & Olshavsky, R. W. (1996). A reexamination of the determinants of consumer satisfaction. *Journal of Marketing*, 60(3), 15.
- Stokes, D. E. (1997). Pasteur's quadrant Basic science and technological innovation. Washington, DC.: Brookings Institution Press.
- Swain, H. (2013). Research funding emphasis on 'impact' spawns a new industry. The Guardian. November 12.
- Swanson, D. J., & Creed, A. S. (2014). Sharpening the focus of force field analysis. Journal of Change Management, 14(1), 28–47.
- Tang, E. W. K., & Kwan, K.-M. (1999). Replication and theory development in organizational science: A critical realist perspective. Academy of Management Review, 24(4), 759–780.
- Touhey, J. C. (1974). Situated identities, attitude similarity, and interpersonal attraction. *Sociometry*, 37(3), 363–374.
- Van de Ven, A. H. (2002). 2001 presidential Address: Strategic directions for the Academy of Management: This Academy is for you! *Academy of Management Review*, 27(2), 171–184.
- Van de Ven, A. H. (2007). Engaged scholarship: A guide for organizational and social research. London: Oxford University Press.
- Van de Ven, A. H., & Johnson, P. E. (2006). Knowledge for theory and practice. Academy of Management Review, 31(4), 802–821.
- Varzi, A. C. (2006). Encyclopedia of cognitive science. Hoboken, NJ: Wiley.
- Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance Model: Four longitudinal field studies. *Management Science*, 46(2), 186–204.
- Vessey, I. (1991). Cognitive fit: A theory-based analysis of the graphs versus tables

S. Fox, S.N. Groesser / European Management Journal xxx (2016) 1–9

literature. Decision Sciences, 22(2), 219-240.

- Voss, A., Rothermund, K., & Brandtstädter, J. (2008). Interpreting ambiguous stimuli: Separating perceptual and judgmental biases. *Journal of Experimental Social Psychology*, 44(4), 1048–1056.
- Walsh, J., Tushman, M., Kimberly, J., Starbuck, B., & Ashford, S. (2007). On the relationship between research and practice: Debate and reflections. *Journal of* Management Inquiry, 16(2), 128-154.
- Warde, A. (2005). Consumption and theories of practice. Journal of Consumer Culture, 5(2), 131-153.
- Welch, J. (2003). Jack: Straight from the gut. NY, New York: Warner Books. Wenger, E. (1998). Communities of practice: Learning, meaning and identity. Cambridge, UK: Cambridge University Press.
- Wijaya, B. S. (2012). The development of hierarchy of effects model in advertising. International Research Journal of Business Studies, 5(1), 73–85.
 Williamson, O. E. (1981). The Economics of Organization: The Transaction Cost
- Approach. The American Journal of Sociology, 87(3), 548–577.
 Womack, J. (2005). Necessary but not sufficient. Manufacturing Engineer, 84(6), 5.

9