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Abstract

Purpose
Pragmatism is very relevant to workplace management and performance measurement, yet in the accounting literature it is a term used loosely and in a colloquial manner. By drawing on a framework based on classical pragmatism, we examine how a pragmatic perspective is discernible in the form and use of management control (MC) practices.

Design/methodology/approach
We collect data using a case study of a firm in the green energy construction sector.

Findings
Building on our analytical framework, we provide evidence that a pragmatic perspective is discernible in both form and use of MC practices, through a clear focus on targets rather than variance analysis, the presence of mutable local MC practices characterised by interaction and problem solving, and the absence of other common MC practices with no clear links to ends-in-view. We also provide evidence of the potential limitations of a pragmatic perspective including myopia and an exacerbation of the inherent bias in organisations towards exploitation.

Originality/value
We bring analytical clarity to the study of pragmatism in the accounting literature and insights into how a pragmatic perspective is discernible the form and use of MC practices. Further, we show the potential limitations of a pragmatic perspective for management.

Keywords: Pragmatism; Vernacular accounting systems; Calculative cultures; Management control practices.

Management Control Practices and Pragmatism

Introduction

The old adage that 'what gets measured gets done' (Kaplan and Norton, 1992) suggests that performance measurement is inherently pragmatic. In fact over 50 years ago, Dopuch (1962) argued that accounting is underpinned by the philosophy of pragmatism. Later, Micheli and Mari (2014), in seeking to provide a robust theoretical basis for performance measurement, outline clear distinctions between pragmatic and non-pragmatic forms of performance measurement. Lamenting the increasing investment of resources in both the public and private sectors to obtain 'true descriptions' of organisational performance (Micheli and Manzoni, 2010), Micheli and Mari (2014) call for a pragmatic epistemology of performance measurement where measurement is regarded as a knowledge-based process rather than a purely empirical determination.

Pragmatism has attracted attention in the accounting literature and Baker and Schaltegger (2015) find no less than 486 uses of the words 'pragmatism, pragmatic, pragmatically, pragmatics, pragmatist and pragmatists' in ten high ranking accounting journals over a period of 20 years (p. 267). While this could suggest that the philosophy of pragmatism has been comprehensively addressed, Baker and Schaltegger (2015) find that the terms are generally used in a colloquial way rather than in a philosophical one, and so call for a deeper engagement with the philosophy of pragmatism, a call that is echoed by Simpson and den Hond (2022).

Pragmatism is a natural fit with the MC literature given the common focus on problem solving and acknowledgement that universal principles are not applicable in both literatures (Bedford, 2020; Fisher, 1995; Shields, 2008). However, the accounting literature does provide some insights into both pragmatic and non-pragmatic forms and uses of management control (MC) (Power, 2005; Mikes, 2009; Jordan and Messner, 2012). Power (2005) distinguishes between pragmatic and non-pragmatic calculative cultures. Looking at risk management systems in banks, he observes that different (and deeply ingrained) attitudes to measurement give rise to different types of governance structures and MC practices. Building on that work, Mikes (2009) argues that calculative cultures are constitutive of, and constituted by, the particular form and use of the control systems for risk management. She provides empirical evidence of the presence of such differences in the form and use of MC practices emerging from different calculative cultures in the context of enterprise risk management systems.

Jordan and Messner (2012) find that pragmatic measures--where the representational qualities of numbers are not of primary concern--are used by firms where *doing* takes priority over *measuring*. Along with Power (2005), they point to the importance of top management attitudes in determining how performance measures are used. Although the form of the measures did not change over time, their pragmatic use became more difficult to sustain as performance evaluation pressure increased.

While these studies provide some insights into pragmatic forms and uses of MC practices, much more remains to be understood about outcomes of pragmatism for organisations and their practices. How is a pragmatic perspective defined and how is it discernible in the form and use of MC

practices? What are the potential limitations for management of a pragmatic perspective in the form and use of MC practices?

Addressing these questions, we make three contributions. First, drawing on the philosophy of American classical pragmatism, and specifically Simpson and den Hond's (2022) elaboration of its three defining features (commitment to process, approach to knowing, and orientation towards the future), we bring analytical clarity to the notion of pragmatism in the context of the MC literature. Applying this analytical frame to our case company, a division of a multinational company (which we call Buildpro) operating in the green energy construction materials business, we provide empirical support for its categorisation as 'pragmatic'. Our study thus contributes greater consistency in categorising organisations and MC practices as pragmatic or non-pragmatic.

Second, using our case study we provide insights into the form that MC practices take and how they are used by management in a pragmatic company. We observed the presence in Buildpro of mutable forms of MC practices --locally emergent vernacular accounting systems (VAS) (Kilfoyle *et al.,* 2013)--to share empirical experience and to solve problems. These VASs were not used as defensive mechanisms and no interest was shown in accumulating knowledge if doing so was not immediately useful in solving challenges. We also find a pragmatic perspective discernible in the use of both local and official MC practices to focus interactions and make sense of what can be expected from actions. This was evident in management's use of storytelling which elevated instances of quick innovative responses to the status of corporate legend. Further, we observe the direction of attention (Power, 2005) towards *predicted numbers* (focused on the future) which are crafted and recrafted, as opposed to an emphasis on analysing variances between past predictions and actual results (as evident in Mazmanian and Beckman's (2018) study, for example). The perceived value of predicted numbers is based on their ability to generate action. Thus our findings in relation to MC practices extend Jordan and Messner's (2012) argument that *doing* is prioritised over *measurement* when numbers are used pragmatically. Our findings suggest that when MC practices are used pragmatically, it is not so much that doing is prioritised over measurement, but that measurement is valued based on the doing and progress that it brings about.

Finally, in response to calls for firms to adopt a pragmatic perspective (Micheli and Mari, 2014), we provide empirical evidence of the potential challenges for management of a pragmatic paradigm that results in consistent (rather than countervailing) reinforcement (Curtis and Sweeney, 2017) between the pragmatic perspective and MC practices. Countervailing reinforcement refers to the presence of opposing forces that generate dynamic tension with MC systems (Curtis and Sweeney, 2017). We argue that such a perspective has the potential to become myopic in prioritising short-term progress over longer-term objectives, for example short-term over long-term innovations (Bedford *et al.,* 2019; O'Reilly and Tushman, 2013; Gibson and Birkinshaw, 2004), and result in momentum in a single direction (consistent reinforcement) (Curtis and Sweeney, 2017).

The remainder of this paper is set out as follows. In the next section we review prior literature on pragmatism to identify its distinctive features. We also select some prior literature that has adopted the term 'pragmatism' in describing distinctive forms of measurement and control. We then present our research question and afterwards our research methods, and our case firm. We follow with our findings, a discussion, and our conclusions.

Management Control Practices and Pragmatism

The accounting and management literatures have referred to pragmatism in measurement and control systems, although what exactly constitutes a pragmatic use is unclear in much of the literature. Ansell and Boin (2019) point out that 'In colloquial speech, the term *pragmatism* refers to a practical and commonsensical way of behaving, characterized by flexibility and compromising to get things done' (p. 1083). Catasús *et al.* (2007) point to the use of measurements in a pragmatic way by organisations, maintaining that 'an indicator is a number that management is interested in because of its efforts to manage the organization' (p. 508). Denis *et al.* (2006) conclude that 'A number system constitutes a technology of representation and a powerful practical tool that actors have at their disposal for locking up a strategic decision' (p. 372). The challenge presented by the literature, and illustrated by these quotes, is that almost any MC practice might be described as pragmatic and there is an absence of analytical clarity on how we can distinguish pragmatic from non-pragmatic practice.

In the first section of our literature review, we seek to bring greater analytical clarity to what a pragmatic perspective entails by drawing on the philosophy of pragmatism, specifically American classical pragmatism. This has been found to be relevant to workplace management in general (Simpson and den Hond, 2022) and accounting control in particular (Dopuch, 1962; Lorino, 2018) because it draws attention to the importance of distinguishing between representation and the represented (the map and the territory), and highlights the trajectory of many management tools, born out of communities of inquiry but progressing from inquiry to control (Lorino, 2018; Martineau, 2019). The second section of this review focuses on insights from prior literature that suggest that a pragmatic perspective in an organisation is discernible in the form and use of MC practices. We conclude the section with our research question.

Classical pragmatism and its distinctive features

The work of classical pragmatists such as Peirce, James, Dewey, Addams, Mead and Follett is argued to be relevant to organisational management (Simpson and den Hond, 2022; Shields, 2008; Lorino, 2018; Kelemen and Rumens, 2013). While there are different starting points for explaining classical pragmatism, Shields (2008) maintains that focusing on its experimental nature is helpful in understanding its potential: 'Classical pragmatists believe that purposeful human inquiry is both provisional and grounded in a problematic situation' (p. 206). She holds that the logic of the inquiry is linked to its consequences in dealing with the problem. For pragmatists, 'belief is held provisionally true when acting upon it brings about the desired difference to the world' (Sergeeva *et al.,* 2022). The focus of pragmatism on practical consequences (Putnam, 1994) differs from other perspectives that seek objective truth independent of consequences. As Sergeeva *et al.* (2022) explain, while pragmatism acknowledges the existence of an independent objective reality, that reality is viewed as mutable (James, 1907). It is by means of 'doing' that beliefs develop (Dewey, 1929). While there are considerable differences between the views of classical pragmatism philosophers, 'All express a profound distrust of certainties, finalities and universals, arguing instead for experience as the only admissible source of practical and moral knowledge' (Simpson and den Hond, 2022, p. 129).

In seeking to build a platform to support the application of the philosophy of pragmatism in contemporary management research, Simpson and den Hond's (2022) identify three distinctive features of classical pragmatism: its commitment to process, its approach to knowing, and its orientation towards the future, which they argue 'lay invaluable groundwork for the study of organization and organizing' (p. 126). They acknowledge that individually the three features do not define the distinctiveness of pragmatism, but argue that in combination they offer 'a unique philosophical perspective on the day-to-day realities of lived experiences' (p. 131).

The first feature, commitment to process, sees life as inherently unpredictable but at the same time full of opportunities. Shaped by Darwin's work on evolution, classical pragmatists recognise the dynamic nature of life and the challenges that this creates in making sense of our experiences (Simpson and den Hond, 2022). Simpson and den Hond point in particular to the dynamic nature of our interaction with others, i.e., 'as to what-next we might expect *in relation to* the actions we might take' (Shotter 2006, p. 600). According to Shields (2008), a full understanding of complex problems requires taking different viewpoints. Over 50 years ago, Dopuch (1962) wrote that pragmatism underpins the importance of accounting and that 'the accounting function postulates a mixture of the incomplete and the complete, the determinate and the indeterminate' (p. 257). If the world was completely determinate it could be managed as if it was a machine and if it was completely indeterminate managers would have to rely on luck. Prediction and control are central to accounting processes. Dopuch (1962) highlights the significance of accounting processes in mapping and managing the changing nature of the world, and explains that accounting provides information on anticipated consequences of actions and on progress being made in the realisation of plans. Concern with problem-solving in the face of uncertainty runs through pragmatism (Ansell and Boin, 2019). Ideas are valued for their practical relevance in solving current problems and 'do not have truth outside a particular context but rather operate as tools to accomplish tasks' (Baker and Schaltegger, 2015, p. 266), nor do ideas have a separate life but are 'instruments that should be picked up, dropped, and modified at will to meet the exigencies of our changing life condition' (Barnes, 2008, p. 1545).

The second feature of classical pragmatism is its approach to knowing. In essence, what is confirmed through action is verified, and it is only through action that the truthfulness of knowledge can be judged (James, 1898; 1897). For pragmatists, actions 'are not based on unquestioned truth but rather reflective experience and working hypotheses' (Shields, 2008, p. 215). In other words, the truth of a statement does not depend on how accurately it represents the world but instead on how useful it is for generating action (Baker and Schaltegger, 2015). Hence, the process of knowing (Dewey, 1938) 'generates 'truths' that arise in empirical experience, while at the same time shaping this experience' (Simpson and den Hond, 2022, p. 132). The focus on achievement relates to a willingness to act, a feature that is evident in the accounting literature: 'If it works in your experience, if you [management] are ready to act on this new insight after having been frustrated, the information has truth value in a pragmatic sense' (Jonsson, 1998, p. 418). Hence truth is relative and as Dopuch (1962) writes, 'pragmatism is not concerned with the discovery of … some all-embracing reality which is the background for every experience and for all human activity." (Butler)' (p. 254). Rather, as James (1907, p. 22) explains, pragmatism is a way 'of looking away from first things, principles, 'categories', supposed necessities; and of looking towards last things, fruits, consequences, and facts'.

The last of the three features of pragmatism, as argued by Simpson and den Hond (2022), is its orientation towards the future. Pierce (1878) proposes that the meaning of present-day actions and choices lies in their conceivable future consequences. As Dopuch (1962, p. 257) explains: 'Man has to learn to distinguish processes whose outcomes meet his needs as opposed to those which are frustrating.' Of relevance here is the concept of *amelioration*, the possibility to make things better. While the classical pragmatists did not necessarily agree on whether a better world is one where the individual or society is better off (Barnes, 2008), a key underlying assumption of pragmatism is that 'the world doesn't guarantee progress' (Dopuch, 1962); thus, useful ideas and actions are those that have the capacity to generate progress in a precarious world.

Means are used to attain ends and ends need to be useful in social contexts (Baker and Schaltegger, 2015). Dewey (1939) considers the distinction between means and ends as temporary and relational and refers to them both as ends-in-view (Simpson and den Hond, 2022). This temporal view is related to the emphasis on process which dissolves strict dichotomies such as means and ends (Shields, 2008). The ends we imagine are shaped by the means used and the term ends-in-view recognises that they tend to be adjusted and given meaning by action (Ansell and Boin, 2019). As Dopuch (1962) writes, 'the world is sufficiently indeterminate that the establishment of ends-in-view and therefore the means of accomplishment are relative and temporary. As changes take place, new ends-in-view and new means must be selected based upon prior knowledge and present conditions' (p. 258). 'Pragmatism points its finger at us and says "It is you who is in charge"!' (Baker and Schaltegger 2015, p. 269). Dopuch (1962) discusses the value of accounting data in addressing the specific ends being sought, how they are to be obtained (means), and how the expected outcomes underlie the choices of ends and means. Pragmatism 'helps to keep decision makers grounded in the reality of what is possible (vs. what is desirable)' (Ansell and Boin, 2019, p. 1089). '[Pragmatism] tells decision makers not to reach for the moon. In the Pragmatist perspective, perfection is the enemy of the good' (Ansell and Boin, 2019, p. 1089).

Based on this discussion of the literature, Table 1 presents a summary of how Simpson and den Hond's (2022) three key features of classical pragmatism collectively manifest in an organisation. Building on the recognised relevance of pragmatism to management research and practice (Simpson and den Hond, 2022; Shields, 2008; Lorino, 2018; Kelemen and Rumens, 2013), we consider how pragmatism is discernible in MC practices. Control problems are central to the rationale behind MC practices (Bedford, 2020). Pragmatism links problematic situations to ends-in-view and indeed Shields (2008) points to its usefulness in addressing control problems such as balancing budgets and hiring new employees. Further, neither MC theory (Fisher, 1995) nor classical pragmatism (Shields, 2008) subscribe to a universalistic view of how a problem should be resolved. As Shields (p. 206) explains: 'The goal is not to find eternal principles, but rather to use an ongoing experimental and experiential process to develop plans for action that are evaluated in light of practical consequences.' In the next section, we review insights from prior literature that suggest that a pragmatic perspective in an organisation is discernible in the form and use of MC practices.

[Insert Table 1 here]

Pragmatism and form and use of MC practices

In considering the literature that underpins our question of how a pragmatic perspective it discernible in the form and use of MC practices, we do not carry out an exhaustive review of the literature on pragmatism and MC practices, given that term has been used loosely (Baker and Schaltegger, 2015). Instead, we select from the body of literature a number of insights that suggest that a pragmatic perspective is discernible in the form and use of MC practice.

Kilfoyle *et al.* (2013) identify local problem-solving systems which they refer to as vernacular accounting and control systems, vernacular accountings, or vernacular accounting systems (VAS). VAS are 'accounting and control systems that are self-generated by organizational actors in the context of their work and not officially sanctioned within the organizational hierarchy' (Kilfoyle *et al.*, p 382). These systems develop among communities of practice within organisations and reflect '... a process by which a manager identifies specific categories of information needed to conceptualize or accomplish a task, decides on the criteria by which information is collected and accepted as valid, and structures the information for retention and use' (Kilfoyle *et al.*, p. 387). Drawing on Kirsh and Maglio (1994), Kilfoyle *et al.* (2013, p. 393) propose that one of the ways VAS can be useful is 'by creating trigger points for quick action.'. While a pragmatic focus on getting things done underlies the use of VAS 'by triggering action or capturing routines,' Kilfoyle *et al.* (2013, p. 391) argue that they can also have epistemic functions, such as providing a defensive resource used where there is resistance or a lack of trust in the formally sanctioned systems, or an inventory of local knowledge to 'facilitate understanding of the context for action,' which may not have immediate ends-in-view. This suggests that a study of how VAS are developed by local management and the functions that they serve (e.g. pragmatic vs epistemic) (Shields, 2008) can provide insights into the adoption of a pragmatic perspective.

The extent to which management is concerned about the representational qualities of numbers in reflecting reality and their orientation towards the future (Simpson and den Hond's, 2022) also provides insights into the adoption of a pragmatic perspective. For example, Jordan and Messner (2012) explain that when measures are used pragmatically, the indicators are framed as means rather than ends, and find that *doing* is seen as more important than *measuring* and thus the representational qualities of numbers are not of primary concern. They also point to the importance of the views of top management in determining the degree to which measures are used flexibly and argue that when pressure for performance evaluation mounts within the control system, a pragmatic attitude becomes more difficult to sustain. They find that when top management considers measurement to be an end and so uses them to measure performance, operational managers became increasingly worried about the cause-and-effect between actions and measures, and consequently will voice reservations about the completeness and accuracy of the latter.

The literature provides other examples of MC practices not being used pragmatically, where measurement is an end in itself. Mazmanian and Beckman (2018) give the example of a hotel management company that used budgeted numbers as if they were undisputed future projections. The company took such pride in their accuracy and in the low variance between what had been budgeted and the actual numbers, that Mazmanian and Beckman (2018, p. 361) relate that there was 'a prevalent sense that if someone was not "numbers driven" or able to "make their numbers," they would not work out in this firm.' A further example of non-pragmatic use of MC practices is

Power's (2005) description of 'calculative idealists' whom he contrasts with 'calculative pragmatists.' While his study focuses on operational risk management in banks, his analysis is informative in a management control context. He argues that calculative pragmatists 'typically regard numbers as attention-directing devices with no intrinsic claims to represent reality' (p. 592). This reflects the importance of interaction in leading to a fuller understanding of complex problems as part of the commitment to process (Simpson and den Hond, 2022). In contrast, calculative idealists 'typically regard numbers as aiming to represent the costs of true economic capital based on high quality frequency data, and inducing correct economic behaviour in the light of these risk measures' (Powers, 2005, p. 593). He points out that these different calculative cultures have implications for firm governance and for the standing of operational risk management within the bank's hierarchy. Mikes (2009) contrasts calculative pragmatists and calculative idealists in risk management control systems in two banks. She associates calculative pragmatists with a holistic form of risk management where numbers are used interactively as a learning tool, the corporate governance imperative is one of risk-based internal control, and managers exhibit a 'quantitative scepticism' whereby risk numbers are taken as trend indicators rather than absolute truths. This reflects a commitment to an interactive process, an approach to knowing that reflects the need to drive action, and a focus on progress in terms of trends as part of an orientation towards the future (Simpson and den Hond, 2022). Mikes (2009) explains that the 'quantitative enthusiasm' of calculative idealists is built on a belief in the ability of numbers to accurately reflect the underlying economic reality, on an acceptance of maximizing shareholder value as a corporate goal, and on a reliance on numbers as ammunition for diagnostic performance measurement systems (Simons, 1995). In elaborating on these calculative cultures, she argues that they are constitutive of, and also constituted by, the particular form and use of the control systems for risk management observed in her cases. Mikes (2009) calls for further work on how different calculative cultures shape the form and use of MC practices.

Underlying different calculative cultures are different beliefs in the capacity of accounting information to capture the complexity and uncertainty over objectives and consequences of actions (Burchell *et al.,* 1980; Hopwood 1972). Building on theory underpinning measurement in the physical sciences, Micheli and Mari (2014) argue that a pragmatic paradigm of measurement requires the adoption of a model-based view, as opposed to a truth-based one. A model-based view 'regards measurement as a process, which aims at attaining 'adequate-to-purpose' results, in contrast to a truth-based view which aims at attaining 'true' results' (p. 151). Such a view reflects an orientation towards the future that is grounded in what is possible, and acknowledges the inherent limitations of measuring social phenomena (Busco and Quattrone, 2018; Burchell *et al.* 1980). Micheli and Mari also argue that indicators should not be seen as exact representations of reality and that 'any measurement result could only generate information that is meaningful in the context of the model within which measurement is being carried out' (p. 151). They stress that indicators should be used as ways to gather information about organisational performance that is 'adequate'. Under a model-based view, absolute precision is considered meaningless and any search for increased precision in measurements should be subjected to a cost benefit analysis. Asselineau *et al*. (2022) also see a need for a more parsimonious, smarter and adequate use of numbers given their limitations. Lorino (2019) argues that to be meaningful and useful, a measure must provide indications and clues to help orientate the user's inquires and actions.

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In summary, this section presents evidence from prior literature that a pragmatic perspective in an organisation is discerible in the form and use of MC practices. However, this has only been considered in any depth in relation to risk management practices (Mikes, 2009). We use empirical data from a division of a multinational company operating in the green energy construction materials business (Buildpro) to address the following question: How is a pragmatic perspective discernible in MC practices, both in their *form* and in the way they are *used* by management? Additionally, while Micheli and Mari (2014) have argued for the benefits of a pragmatic view of performance measurement, we consider whether there is empirical evidence of potential limitations of a pragmatic form and use of MC practices.

Research methods

We adopted a case study approach and collected data on Buildpro, the largest division of a company involved in the manufacture and fitting of traditional and green energy building materials. When we began the case study we intended it to be part of a larger study designed to address questions on the role of MC practices for innovation. It became apparent during our analysis of the division's MC practices and of its culture that its focus on action, problem solving, practical consequences, and 'what works' (Shields, 2008) as well as its flexible approach to the adoption and abandonment of ideas, that the division provided a good context to study the practical implications of a pragmatic perspective.

As recommended by Yin (2003), we collected data from different sources to increase the plausibility of findings (Ahrens and Chapman, 2006). Before starting the interviews, we obtained from public sources as much information as possible on the company and its products. In addition, we were given access to internal company documents such as strategy presentations, agendas for meetings, and monthly management packs.

We conducted 22 semi-structured interviews of 20 employees across the functional areas of the division (see Appendix 1). The interviews took place in formal surroundings in the field and lasted between 40 and 90 minutes each. As Baker and Schaltegger (2015) advise, pragmatism involves exploring how participants use information and derive meaning from it. Pragmatism is concerned with lived experiences. We asked questions about how numbers are used to derive meaning and provide a basis for action (see Appendix 2). Each interview was digitally recorded and notes taken. As soon as possible, the interview recordings were transcribed verbatim. Both authors listened to the recordings and checked the transcripts for accuracy.

The sufficiency of data is a challenging question for qualitative researchers with no agreement on what constitutes the right number of interviews (Malsch and Salterio, 2016; Dai *et al.*, 2019). Many researchers argue that data collection can stop when there is saturation, but that concept is problematic (Dai *et al.*, 2019) and there are no hard and fast rules (Suddaby, 2006). The richness of information collected in our initial interviews, the eventual decline in new insights with additional ones, and the informal norms of data collection in accounting (Dai *et al.*, 2019) led us to determining that we had sufficient data to address our research question.

We visited the division on six occasions during which we had the opportunity to speak informally over coffee with interviewees and also to observe how staff interacted with each other while simply waiting at the reception desk or in the corridor outside the boardroom. We were also given a tour of one of the plants.

The importance of a disciplined approach to data analysis has been well documented (e.g. Miles and Huberman, 1994) and a structured analytical approach was used for data analysis in this study. However, the process is not linear. As Ahrens and Chapman (2006, p. 836) write: 'Problem, theory and data influence each other throughout the research process...iteratively seeking to generate a plausible fit'. Data analysis was carried out by both authors. As recommended by Patten (1990), we developed an initial set of codes before the interviews and refined them as the interviews progressed and patterns emerged. Codes included types of MC practices (such as strategic planning), numerical representation, measurement, focus on action/doing, future/past orientation of numbers, focus on problems, attitudes towards numbers, and basis for action. We coded the transcripts manually and prepared comprehensive word documents based on codes to organise the findings. We noted contradictions and probed into them in subsequent interviews. As data collection progressed, we further developed research objectives and refined the initial codes based on a re-examination of the literature and the data. For example, the codes were expanded to encompass Simpson and den Hond's (2022) three features of pragmatism. Data were then re-examined to discern fit with emerging patterns and we searched for evidence (Miles and Huberman, 1994) contradicting our emerging patterns. This 'continuous back and forth questioning of interpretations and discussion of recorded field data' (Ahrens and Chapman, 2006 p. 833) demands time and concentration. We used an iterative approach between data and theory to interpret findings and formulate conclusions. This involved considerable cross-checking between transcripts as data collection progressed. Our comprehensive word document organised around codes facilitated the selection of quotations and we used them to present the 'thick description' (Denzin, 1994) that appears in the next section. The transcripts were read again in full to ensure no quotations were taken out of context.

Company background

The Buildpro division employs well over 1,000 employees globally, most of them in Europe. The division commenced operations as a manufacturer of traditional building materials. Approximately twelve years before our study the business model was changed to emphasise growth through innovation, and the division started to offer innovative green products. As we commenced data collection, it was immediately clear that Buildpro strongly emphasised taking action and problem solving, and was orientated towards the future. Also evident was a relatively flat organisational structure, straightforward proposal approval processes, and a sense of empowerment and accountability among the management team.

> There is that constant yearning to do your damnedest and because it is such a flat structure, if you take the Divisional Operations Director, he is interfacing with the group chief executive at the end of every month. I know culturally he wants to be in a situation where he can say look we have made dramatic progress on such and such. The scope for that interaction is there ... There is that strive to continually improve. (Senior manager 4)

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It is that type of culture. If you want to spend some money, you've got to justify it. The [X] project I put to the Board a month or two ago, I put half a dozen slides in, this is what I'm doing, any objections? And there was none, just get on and do it. So when the contract came in, I signed it. (Middle manager 7)

To identify opportunities, management emphasised generating new ideas from external sources.

... we are very strong at identifying what's going on outdoors, bringing it indoors, analysing it, looking for opportunities in it, and kicking it out if we can't, but more than likely analysing it to the point of discovering opportunity in there and then maximising that opportunity and that's all through our strategic planning process. (Senior manager 2)

The Buildpro focus on action was also reflected in the approach to the taking of meeting minutes.

... we start off with a few actions from previous board meetings ... we generally don't do long minutes, we just do actions and board minutes. (Senior manager 3)

The strong culture of action at times posed a problem for us as interviewers. For example, we sensed impatience or amusement at times when we directed our inquiry towards issues that interviewees did not see as action-focused, such as our asking about a formal mission statement or about the distinction between official MC systems and local ones. It quickly became clear that what interviewees considered important was whether a particular process led to action and 'ends–in-view' (Dewey, 1939) rather than whether it was approved by senior management and whether it was regular or ad hoc.

Detailed insights into how a pragmatic perspective is discernible in the form and use of MC practices are set out in the next section.

Findings

Our objective is to examine how a pragmatic perspective is discernible in the form and use of MC practices and to consider its associated limitations. Simpson and den Hond (2022) argue that the existence of the three key features of classical pragmatism (commitment to process, its approach to knowing, and its orientation towards the future) collectively define a pragmatic perspective. In the following sections, we explain how these features are evident in the MC practices in Buildpro.

Using future-oriented numbers to drive action and solve problems

Many aspects of the strategic planning process at Buildpro were similar to that in other companies in that it consisted of a rolling five-year strategic plan updated in June of each year and culminating in a 50-60 page strategy document that was largely numerical in content. However, a pragmatic perspective was discernible in the use of a future profit target to provide focus for discussions, to make ideas tangible, and to stimulate action. The financial goal was core to the strategic planning process. Interviewees talked about strategic planning as a process that began with some aspirational thinking but quickly boiled down to a single financial goal (profit) and that was regarded as the most important outcome.

> I suppose you see a strategy without numbers, you can just end up dreaming a little bit ... it's an interesting dynamic really because in a sense you probably do want a strategic plan because sometimes it is very good, free-thinking, and you come up with lots of different ideas and it can be very aspirational, but you then have to take that and apply what's called a business reality to make sure we are not dreaming about one thing, but not being able to deliver on that. (Senior manager 3)

> ...everyone is saying what's the 'strat plan'? What they actually mean is what is the strat plan profit? (Senior manager 4)

The use of accounting numbers (sales and profit) to express strategic objectives and drive action was striking. While some qualitative objectives were contained in the strategy (such as training), they were secondary to those expressed in numerical terms. The use of numbers to focus attention on deliverables and reduce 'daydreaming' is consistent with a commitment to process in problem solving and an orientation towards the future (Simpson and den Hond, 2022). At Buildpro, it focused debate on how to achieve the strat plan number. Interviewees talked about the direction that the strategic plan provided and that it was the key to driving action.

> In terms of the big objectives within the strategic plan this year, [Senior Manager] actually came up with a matrix. There were twelve boxes in it and each one of these is like a push button and in behind it … you will find a whole string of actions related to it, that's related to the product development programme up here, what timeframe they have to deliver this, deliver this, deliver this and then what commercial have to do to deliver this, this and this all aligned to the availability of the product. (Senior manager 2)

Quantification of the strat plan motivated prioritisation of actions that led to achieving the number in the short term. Strategies were reconsidered and those seen as not solving current problems or meeting current objectives were abandoned (Baker and Schaltegger, 2015). This kind of re-evaluation is consistent with a pragmatic perspective that treats ideas 'like knives and forks, implements to accomplish particular tasks, and not transcendent truths' (Barnes, 2008, p.1544).

> It can be problematic because you can achieve your financial goals but you might not have achieved your strategic goals and that is a problem … we went through a boom period and we were great. We absolutely knocked the socks off our financial strategic plan. We exceeded it, we beat the strat plan, beat the budget, beat forecasts, beat all those measures. Then we came into the recession and we actually said but we haven't expanded our geographic footprint as much as we should have because our domestic markets were so successful. We were very successful at milking the domestic markets but we weren't meeting our strategic objectives ... there is a danger that expressing things in financial terms, appropriate for budgets and forecasts but I think strategically, I think you are better to keep to the more 'wordy' strategic objectives to be perfectly honest. (Senior manager 2)

Competition between ideas and numbers has been discussed in the literature (Jorgensen and Messner, 2010). The inability of numbers to capture strategic ideas reflects what Morgan (1988) refers to as the 'thinness' of accounting numbers. While top managers recognised this drawback, they valued the use of numbers because they motivate action.

Management's attitude to the representational quality of numbers

Buildpro's perspective was discernible in management's attitude to the representational quality of numbers, consistent with a pragmatic approach to knowing (Simpson and den Hond, 2022. Buildpro produces a typical monthly management pack including actual, budgeted and forecast numbers. The pack provided almost exclusively numerical information rather than any commentary or discussion on the achievement of objectives and included KPIs and breakdowns of sales, for example by product and geographical area. However, managers' comments reveal that they were not convinced of--nor overly concerned about--the truth or accuracy of the budgeted numbers and other non-financial targets.

> I can only guarantee one thing about the budget, that it will be wrong. (Senior manager 2)

Buildpro management had limited interest in analysing whether targets had been achieved and articulated a view of numbers that was close to that of Power's (2005) calculative pragmatists, for whom the trend was more important than the accuracy, even when it was downward.

> I don't get that hung up over targets. The trend is, if the trend is improving all the time, great. If it's not then we've got an issue, so I don't get too hung up on 'it's got to be that percentage.' (Senior manager 1)

> I suppose where we differ from a lot of businesses is we don't beat ourselves up if we're above budget in terms of overheads. I've worked for businesses that practically come to a standstill if you go over budget on overheads and everything stops until you've had a full autopsy, we don't do that. You're expected as a cost centre manager to be able to say 'I'm over budget and that's because ...' (Middle manager 6)

Some interviewees explained that the availability of detailed numerical information in the management pack was important in addressing any questions that might be raised by the company CEO and for debating ideas on how to achieve objectives, such as higher sales. They were aware that the information (both actual and budgeted) had its limitations. For example, one interviewee spoke about the difficulty of providing accurate transportation costs, and another referred to settling on a particular way of calculating profit margins and summed up the general attitude to the limitations of the numbers.

> Transport is an area where our reporting is actually quite weak and it is because really unfortunately our product doesn't lend itself to normal reporting. You know if you get products that fit on a standard pallet, a standard lorry normally fits things like 22 pallets so you can calculate the utilisation very clearly. Because all of our products are all made to order, all different shapes and sizes, it is awkward to really get a handle on the utilisations. (Middle manager 4)

> Profit obviously is measured as a percentage of sales and working capital … we settle for a three month annualised basis but it doesn't work, we get some quirks during seasonality issues but there you go. (Senior Manager 3)

A further example relates to the limitations of cost measurement. The lack of concern over the availability of better manufacturing cost information is evident in what was related by one interviewee.

> ... we always knew it [new product] was going to be difficult but we still developed it and still introduced it to the marketplace. Even though we produced it 2 years ago, we still have problems every time we set up for it. You could spent 2 hours trying to change over [machines for production run] when it should be typically 15 minutes. Would that have changed [decision to introduce new product] if we had that cost information? Probably not because it was something that was wanted in the marketplace. (Middle manager 5)

Interviewees did at times express concern about the lack of focus on forward-facing strategies and the lack of reflection on past actions, such as abandoning plans for expanding the division's geographic footprint. A premature new product launch was given as an example of a downside of the relentless focus on action.

> I think historically we've definitely been known to launch a product and present it to the marketplace before it's even developed. That re-emphasizes that the culture is very much commercially driven and all the i's are not dotted or all the t's crossed. (Senior manager 4)

Similarly, Buildpro did not carry out any ex-post analysis of R&D investments, and this was commented on frequently by management in the interviews as a niggling worry:

> Are we capturing every cost on each individual project that's being invested in that? No. There is probably room to improve in terms of showcasing what the cost of R&D for each individual project is and what has the return been in terms of commercialisation. That is not formalised at all. (Senior manager 4)

We were told by an interviewee in finance that no post-investment analysis was carried out to determine if projects were commercially successful, and return on investment or payback were not used for decision making. At the same time, such concerns seemed to be tempered by the pragmatic view that time would be better utilised solving problems and meeting objectives.

> I don't think anybody goes back to actually say was that worthwhile … innovators will look at it from a case of, if we brought a product to market that people are buying, was it worth it? As opposed to really looking at the nitty-gritty and going, sales are going okay, and we've got a payback of 15 years … the reality is what should we be looking at in terms of a payback. To break even we should be looking at 3, 4 years, maybe 5 years. (Middle manager 6)

> But then again that takes resource and people to record it. It sounds great but in reality we don't have enough people to sort out the problems we have, so proposing that would be something difficult to make into reality … tracking people's hours. Our culture would be that there are more important things to focus on. (Senior manager 4)

While interviewees did not articulate concerns about trade-offs between actions with short-term results and those which resulted in longer-term organisational learning, many saw a need to justify and question the lack of reflection on past performance.

Articulating the corporate values through local storytelling

Perhaps unsurprisingly given the focus on action at Buildpro, we found a dearth of formal cultural controls. When asked about vision and mission statements, one interviewee in finance was dismissive of their worth. At the same time, some interviewees were keen to stress that while vision and mission statements were not valued, this did not mean that the corporate culture was not actively managed; rather it was managed by 'doing'. Those interviewees articulated a strong commitment to clan-type controls.

> If anyone's got time to sit there coming up with mission statements and that, they haven't got a real job so we get rid of them (laughter) ... we're not big on that sort of thing, we know what we're trying to achieve. Yeah, we wouldn't sit and write mission statements. (Middle manager 7)

> I wouldn't confuse there not being a piece of paper with there not being … [management of the culture] ... because the culture is very, very clear and the people who do well in the business tend to be of the same sort of culture and mindset and it's why we tend to put people ... we pick people up from sites in [X] and [Y], we put them in acquisitions around the world... We're very big on putting people out into remote sites to try and spread that culture. (Senior manager 1)

We heard a similar devotion to the company culture from other interviewees. Enacting the corporate culture was valued over talk of vision, mission, and values. Insights into how they enacted the corporate culture came from descriptions of the hands-on mentality and the emphasis on storytelling.

> [Buildpro] has a very particular lead from the front kind of culture, it's very fast-paced decision making ... we don't sit round in committees trying to figure out where we are going to go. Decisions are made and they are enacted quickly and the leadership of the business lead from the front; they are the first up the hill and it's a very particular culture ... I'm not going to put it off until tomorrow, I'm going to go out and do it today because I'll have something else to do tomorrow. (Middle manager 2)

> ... take our CEO, he's got this entrepreneurial sort of open approach 'can do' attitude and that just filters down through the whole organisation through to the Directors ... and take the meeting yesterday it's all about solutions and 'can do', how will we do this and you're always going to have some people saying, oh no I can't do it because of this, and stuff. But I think ultimately, that sort of culture is really the driving strength behind what we do. (Senior manager 1)

Some stories of innovative timely action (such as a tender received from an architect for a new type of product to be used in a high-profile public building) had corporate legend status. Several

interviewees recounted that the tireless work of product designers, engineers and manufacturing employees had delivered a new product in three months' time.

> In the beginning of November, they were told, we need this product, and the product went to site in January right through production. And it's a case of when that focus comes in and there's an all-encompassing drive from operations and commercial … it was unprecedented in terms of getting it from concept to site in three months. (Senior manager 1)

> We're very reactive and flexible that way, … literally overnight these projects dropped on our desk and I was able to put two Engineers on it and come up with a solution ... So that's the sort of reactive behaviour which is needed as well, which you'd say well sure that wasn't even on our project list three months ago. (Middle manager 3)

> ... that's the 'can do' attitude and that's the kind of culture that we have within the business. (Senior manager 2)

Informal information sharing at Buildpro was common. For example, emails from satisfied clients were circulated among employees and followed up on with praise from senior management. Progress updates were also communicated informally. Off-the-cuff communication was seen as a willingness to voice opinions and put forward ideas.

> ... we wouldn't go through necessarily a formal monthly briefing but we would tend to try and present things like the strat plan, we have an awful lot of people travelling around so an awful lot of communication is done through sort of an ad hoc basis. A bit like this morning, I came in this morning, there's a couple of guys that weren't in yesterday, I spent my first 20 minutes just talking to those guys by their desk because that's often a better way to just get sort of a quick update and do it sort of in an informal basis. (Middle manager 7)

> ... people aren't afraid to speak their mind and say what do you think and maybe we should do this instead of that. (Middle manager 1)

Using lists of tasks and targets to manage performance

Perhaps unsurprisingly, task and target lists were intensively used by managers across numerous functions to manage both what they would do themselves and the performance of subordinates.

> I would manage my time around working through my list of tasks and targets and what do I need to do to satisfy all those tasks and targets. (Engineer 3)

> So, for the first four or five hours of our office meeting every month, it's focused on where we are on those key things. So, at the moment we have about 30 or 35 different initiatives, costing initiatives, product development initiatives that we need to achieve. (Senior manager 2)

The lists were developed by different employees and not officially sanctioned by superiors, as is consistent with a vernacular accounting system (Kilfoyle *et al.*, 2013). The focus of the lists was

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action, thus they facilitated pragmatic rather than epistemic functions (Kilfoyle *et al.,* 2013). As in Kilfoyle *et al.*'s (2013) list of ideal VAS types, tasks and targets helped provide a shared understanding of priorities. Despite not being official control practices, the lists were described by interviewees as a key part of the performance evaluation system, both at an individual and team level.

> ... we will review the tasks and targets from last year, how you performed, what's done, what's not done… then we'll cover the tasks and targets for next year. (Middle manager 1)

> I'd have my tasks and targets and whenever I would do my end of year reviews with my guys, we then break those tasks and targets down into projects and we then assign champions. (Middle manager 8)

> I do a performance appraisal with every manager and I simply pick, we agree four or five key things that have to happen, that I need them to do for the year. We review the ones from last year but that's a small part of it. It's mainly what do we need to do this year, what resources do we need to do it, what kind of things are we going to do that make it happen. (Senior manager 2)

What was emphasised in performance appraisals was what has to happen and how to make it happen. Buildpro had no division or group HR director, and no official process for evaluating performance other than a requirement that each employee has an annual review, a reflection of which MC systems were considered important. Jordan and Messner (2012) find that as evaluation pressures mount, a pragmatic attitude to numbers becomes difficult to sustain and their robustness, or lack thereof, becomes a concern. At Buildpro, performance evaluations did not focus on the meeting of predicted numbers, rather they measured progress against outcomes, and an understanding of how tasks and targets fit into the broader goals of the division was considered essential to getting things done.

> I think the key for it is that everybody understands exactly what's important in their job. They know that they have three or four things that they have to deliver on and that if they deliver on them, they are going to be seen as having a successful year. (Senior manager 2)

> Very few people will ever feel comfortable in our business unless they know that we are going in the right direction and they need to know that what they are focusing on, their particular task and target area is actually fundamental to that goal, to that objective, to that piece of the plan. (Senior manager 1)

Mutable local problem-solving processes

Reflecting Buildpro's focus on problem solving, mutable local processes were developed to address specific problems that were then abandoned when no longer needed. Interviewees gave two examples. First, the appointing of a cross-functional team to address a persistent problem with expensive warranty claims, an issue that had fruitlessly been regularly discussed at meetings. The new team prepared a set of KPIs and set up regular weekly meetings to generate ideas.

> ... we can't keep talking about the same complaints ... so we started to bring in very strong operational controls around our warranties as a percentage of sales, the number of complaints we got, the value of complaints we got, how quick we returned on a complaint, how quickly we closed out a complaint, how regular the complaint was repeating, all were KPI'd and every individual manager was given those KPIs and we brought in a structure where each week we would sit down, ... all we wanted them to do was have their best shot at what was the solution …and we started a process of regularly brainstorming and going through every possible conceivable solution we could. (Middle manager 5)

This VAS served both pragmatic and epistemic functions in that the extensive KPIs generated knowledge and the associated weekly meetings provided a forum for finding solutions. However, the process generated task-specific information rather than broader general organisational learning. All the same, the warranty claims problem that persisted over an extended period was successfully resolved.

> ...it's very important that when you set KPIs people understand what they are about and they have direction as to how the solution can come about and the direction doesn't always come from the top. Sometimes it's a matter of getting people into a room and it's okay for a director of the business to say here this is the new KPI but he mightn't have a clue how it's going to be delivered either. Sometimes it takes a range of people to get into the room and say 'right how are we actually going to deliver' and the warranty would be a perfect example. That was a case of sitting down and saying how are we really going to structure this? First of all almost starting at a strategic level and saying right this is what our model looks like. (Middle manager 5)

A second example is the appointment of a local customer service team and initiation of what was called project Jade, an effort to improve communication with customers. KPIs were introduced to monitor the handling of customer telephone calls left unanswered or inadequately addressed, resulting in lost sales.

> Project Jade was developing methods of communication with our customers to speed up transactions and improve accuracy and make it simpler to do business with Buildpro than any competitor … it's all about billing information, modelling technology, transactions and development of a series of portals for making instant self-service possible across all our geographies and you will see in there that that team had to be set up by the 1st of October, it had to have its executive and its charter all agreed by the middle of November, it had to deliver certain key components of the three modules by end of March and then by the end of May and then by the end of June on that project. (Senior manager 1)

> ...in one of the earlier surveys, customers said we ring and we can't get through or we ring and we are not talking to the right people, so now we monitor all the calls coming in... try and keep abandoned calls to less than 2-3% of the total calls. (Middle manager 1)

Consistent with an orientation towards the future and with the adoption then abandonment of ideas (Simpson and den Hond, 2022; Barnes, 2008), interviewees were conscious of potential KPI

overload. They gave examples, such as number of credit notes, that had been useful in solving a problem, but subsequently discarded.

> It has been pared back, we concentrate on the tasks and targets that we feel best reflect the type of business that we want to give and there are items and issues that to be honest we measured in the past and we said is it worthwhile ... such as number of credit notes issued each month. We thought that if we issue credit notes it is because we are making a lot of mistakes ... but as we went through it we found that it wasn't. (Middle manager 1).

There was no evidence that these local processes were used as a defensive resource (Kilfoyle *et al.* 2013). The importance of localised systems was understood within the company.

> Unless it's a simple problem where you can go right, that's the solution, or we can get together for a quick heads together and come up with a simple or innovative solution to it, you have to put in place the right structures as we talked about with the warranty because that is something that is going to have a significant life as a solution and a structure and an approach to come up with more and more innovative ways of improving our KPIs. (Middle Manager 2)

The way interviewees described control practices shows an emphasis on action and problem-solving.

Table 2 below, summarises the evidence presented above on how pragmatism is discernible in the form and use of MC practice at Buildpro.

<div align="center">[Insert Table 2 here]</div>

In the next section we discuss our findings in light of the extant literature.

Discussion

We draw on the philosophy of pragmatism to examine how a pragmatic perspective is reflected in the form and use of MC practices. We also consider its potential limitations.

Pragmatism and Form and Use of MC practices

How is a pragmatic perspective reflected in the form of Buildpro's local MC practices to communicate empirical experience and solve problems? First, there is local storytelling in the frequent relating of a rapid and successful new product design to communicate empirical experience. We observe how their approach to knowing (what is confirmed through action is verified (James, 1898; 1897)) shapes their empirical experience in relation to their success in designing a new product and elevates it to legend status. Next, to solve problems, mutable local practices were introduced when needed and abandoned when they no longer were. Local practices also appeared in the form of lists of tasks and targets. Additionally, we did not see any form of MC practices that had no clear link to ends-in-view (Dewey, 1939) and no immediate problem to be solved, i.e., no formal mission or vision statements and no post investment appraisal.

What did we observe regarding the use of MC practices? Both local and organisational MC practices were used to focus interaction and make sense of what might be expected following action. Lacking such focus, strategy without numbers was seen as just daydreaming. Multiple viewpoints were valued, although at the same time MC practices were used to avoid endless debate and bring about action based on collective experience (Shields, 2008) (e.g., the case of warranty claims). This use reflects the epistemology of action that is at the core of a pragmatic perspective. While local MC practices facilitated the accumulation of task-specific knowledge, they did not build up a bank of knowledge for possible, but undefined, future action (Kilfoyle *et al.*, 2013). There was no evidence that local MC practices were used as a defensive resource.

We also did not see future-oriented numbers, e.g. targets, budgets, forecasts, reforecasts, used as an accurate prediction of the future (in contrast to the firm studied by Mazmanian and Beckman) or for historical variance analysis. Their empirical experience (Simpson and den Hond, 2022) of the connection between numbers and action justified the constant investment of resources in crafting and recrafting the numbers (Chua, 2007), and numbers were used to assess progress in terms of trends and outcomes rather than to show deviations from past predictions. As with Power's (2005) calculative pragmatists, Buildpro managers were enthusiastic about the use of measures to direct attention as opposed to being accurate reflections of reality. Pragmatists do not engage in action for action's sake, but rather in the hope of making things better (Koopman, 2006). Thus, a pragmatic perspective sees truth in ideas that achieve the desired ends 'because the world doesn't guarantee progress' (Dopuch, 1962). Dopuch's work draws attention to two different processes in relation to measurement: The first is a future-oriented approach with targets and forecasts, the second a way to provide feedback on progress to date with information on the variances between achieved numbers and targets set in the past. In differentiating between these, Dopuch's (1962) work helps move from Power's (2005) setting of operational risk management to strategic and operational MC practices. Our findings reveal a more nuanced insight into the use of measures, illuminating that the attention given to numbers depends on their usefulness in reaching ends-in-view. This is in contrast to an absence of value placed by management on knowledge of where they currently are (actuals) compared to past expectations of where they thought they would be (i.e. traditional variance analysis). The managers we interviewed were not convinced, nor were they overly concerned about, the robustness of the predicted numbers, and their usefulness in evaluating performance. What they did value was their usefulness in driving action to achieve progress, progress being viewed in terms of trends and outcomes rather than meeting specific numerical targets.

Mikes (2009), in the context of enterprise risk management, associates numerical enthusiasm with calculative idealists and associates numerical scepticism with calculative pragmatists. Consistent with Mikes' view that calculative pragmatists are sceptical of the ability of numbers to measure true operational risk, we found that the pragmatists at Buildpro did not believe that numbers accurately represent progress. At the same time, our evidence suggests a co-existence of enthusiasm for predicted numbers and scepticism (or more aptly realism) about the value of variances between past predictions and current values, consistent with a pragmatic approach to knowing (Simpson and den Hond, 2022).

According to Flamholtz (1983), measurement is a 'process of assigning numbers to represent aspects of organizational behaviour and performance' (p. 156). Previous evidence of pragmatic

approaches in the accounting literature point to scepticism rather than enthusiasm for measurement (Mikes, 2009) and prioritisation of doing over measurement (Jordan and Messner, 2012). As we have said before, for pragmatics doing is not valued over measurement (Jordan and Messner, 2012), but rather measurement is valued based on the doing that results. Catasús *et al.* (2016) maintain that it is not primarily the completeness or accuracy of measures that drive action, but rather their extreme value or unexpectedness. However, our findings suggest that measures do not need to be complete, accurate, unexpected, or extreme to drive action. What is important is the belief that they do.

While many aspects of the form and use of MC practices reflect a pragmatic perspective at Buildpro, we did observe the use of certain MC practices which could be interpreted as non-pragmatic. The limited attention given to strategic ideas when the strat plan number was achieved is consistent with a pragmatic perspective that strategic ideas operate as tools to accomplish tasks and should be set up and abandoned as needed (Barnes, 2008), although it could be interpreted to reflect a perspective at that time that the strat plan number was an end in itself rather than an end-in-view with implementation of the strategic ideas needed for future ends-in-view. Managers were aware that numbers could not capture strategic ideas and that ideas were ignored if they did not address current problems. This brings us to some of the limitations of a pragmatic perspective which we discuss next.

Potential limitations of a pragmatic perspective

Micheli and Mari (2014) build a case for the adoption of a pragmatic perspective. Unsurprisingly given the lack of clarity to date on what such a perspective entails, there is little discussion in the literature of its potential limitations. Following our explication of how a pragmatic perspective is discernible in the form and use of MC practices, some potential limitations for management were apparent in our study.

First, we found that Buildpro's MC practices tended to prioritise actions with short-term outcomes. The division did not subscribe to the use of a formal beliefs system--as described by Simons (1995)--because no connection was seen between written core values and action. They had no explicit innovation strategy either. There was no evidence that Buildpro saw any long-term benefit in explicitly stating their core values and innovation strategy, particularly as the division expanded geographically. We found that quantitative information was used to focus management attention on knowledge sharing and doing, not on retrospectively reflecting on past performance, for example on that of R&D investments. While such reflection may not lead to immediate action, it may generate knowledge useful in the long term. At Buildpro the value of ideas was judged by their usefulness in the short term, rarely in terms of what might have been (although interviewees displayed some awareness of this as they reflected on the culture of the division). Such short-term thinking can lead to management myopia and obviously does not facilitate the accumulation of long-term knowledge. The constant stressing of actions leading to outcomes draws attention to the potentially problematic nature of mutually reinforcing pragmatic perspectives and MC practices. Curtis and Sweeney (2017) argue that momentum within a single direction will dominate without opposing forces to generate dynamic tension within MC practices. The lack of investment in epistemic functions of MC practices (such as building inventories of local knowledge), which could contribute to broader or longer-term organisational learning at Buildpro probably

contributed to the absence of countervailing forces. The division emphasised short-term rather than long-term R&D projects consistent with the focus on translating action into progress. However, the difficulties associated with this inherent bias toward short-term orientation like that at Buildpro is that exploiting current competencies takes such precedence that new ones are not developed, a trap described in the ambidexterity literature (Bedford *et al.,* 2019; O'Reilly and Tushman, 2013, Gibson and Birkinshaw, 2004). A pragmatic perspective may exacerbate this kind of bias.

Conclusion

Our contribution is threefold. First, by drawing on a framework developed from the philosophy of pragmatism, we bring analytical clarity to the study of pragmatism in the accounting literature (Baker and Schaltegger, 2015), in particular by providing a basis for evaluating the form and use of MC practices. Second, we respond to calls in the literature (Mikes, 2009) for empirical evidence on how a pragmatic perspective is discernible in the form and use of MC practices. Third, while we acknowledge the arguments made by authors who encourage adoption of pragmatism (Micheli and Mari, 2014), we outline its potential limitations, including myopia and exacerbation of an inherent bias towards exploitation.

Our study examines how a pragmatic view is discernible in the form and use of MC practices in a single organisation. A pragmatic view is likely to interact with other contextual factors and may result in different forms and uses in other organisations. Further, we focus on particular MC practices that are affected by pragmatism. Others may not display any pragmatic features. Future research could usefully explore how a pragmatic perspective is discernible in MC combinations in a package (Malmi and Brown, 2008; Bedford, 2020). Further qualitative work is also needed into the 'messiness of experience' (Simpson and den Hond 2022, p. 137) of how different perspectives manifest. The ideal types of calculative pragmatism and calculative idealism identified by Power (2005) may not exist in pure form. We found some evidence that Buildpro adopted a less pragmatic perspective at times.

Building on our contribution of bringing analytical clarity to a pragmatic perspective (summarised in table 2), future research could use a longitudinal design to explore the origins and resilience of pragmatism in firms. Mikes (2009) asks whether different approaches to enterprise risk management arise from fundamentally different management cultures or whether they might be due to different stages of firm development. The same question can be posed for pragmatic or idealistic calculative cultures. Jordan and Messner (2012) describe how the pragmatic and flexible use of indicators gave way to coercive use as evaluation pressures mounted. In some circumstances, these calculative cultures may reflect fundamentally different management cultures that are difficult to change. There is evidence of this in the pragmatic calculative culture of Buildpro, and in the resilient idealistic calculative culture of the firm studied by Mazmanian and Beckman (2018) with its unquestioned primacy of budget numbers.

Future research could also examine whether the potential limitations of a pragmatic perspective such as short termism can be avoided or whether its focus on problem solving makes it difficult for managers to take a long-term perspective. Lastly, we focused on potential limitations from the perspective of management and future research could usefully examine potential limitations at an

individual level in terms of mental models (Micheli and Mari, 2014) and whether they are deeply ingrained (Senge, 2006).

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Appendix 1

List of interviewees

Title of interviewee	**Referred to as** To make better sense of what was related by interviewees, we have indicated the level of the interviewee. At the same time, to ensure a degree of anonymity, within those roles, we assigned interviewees a number at random.
Managing director of division (2 interviews)	Senior manager (1-4)
Finance Director (2 interviews)	
International commercial director	
Operations Director	
Head of R&D	Middle manager (1-9)
Head of Chemical Engineering	
Finance manager	
Finance manager	
Business Unit Manager	
Divisional operations manager	
Business Unit Manager	
Business Unit Manager	
Customer Services development manager	
Member of R&D team	Engineer (1-4)
Chemical Engineer	
Technical support	
Product development/commercial interface	
Sales Director	Sales staff
Management Accountant	Finance staff (1-2)
Accountant supporting R&D	

Appendix 2 Master Interview Schedule

<u>Background</u>
Role, responsibilities, length of time with company
How is your unit/function organised?
What level of interaction do you have with other functions?
What are key meetings that you are involved in?
> *Probes*
> Who attends? How frequently? What is typically discussed? What documents are relied on
> at meetings?

<u>Strategic planning</u>
Describe the strategic planning process
Explain the role of your unit in developing strategy
What is the nature of discussion at strategy meetings?
> Probes
> Which areas generate most discussion?
> How are finance information and numbers used at the meetings?
> How are new ideas incorporated into the strategic plan?

What is the output of the strategic planning process?
> *Probes*
> How much focus is there typically on new strategic areas in the strategic plan?
> How are numbers used in the strategic plan?
> What level of detail is there on new products/new markets?

Do employees have a clear idea on what strategic initiatives are likely to receive support?
> *Probes*
> What are the main factors that determine if a strategic initiative receives support?

What kind of competition occurs between different strategic initiatives?
> *Probes*
> How is the expected outcome of different strategic initiatives determined?
> How important is a quantification of the outcome of initiatives?

Is there an R&D strategy?
> *Probes*
> How is the success of different R&D projects evaluated?
> How are R&D projects selected for funding?
> How are long-term and short-term projects managed? Competition between the two?

<u>Budgeting and forecasting</u>
What is the role of your unit/function in developing budgets and forecasts?
How is the strategy related to the budgeting process?
> *Probes*
> Why are budgets prepared?

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How useful are they?

What happens when budgets become out of date?
> *Probes*
> How are forecasts used?
> How do you try and increase accuracy of budgets?

How are variances from budget treated?
> *Probes*
> Does this vary between different functions?
> What level of discussion takes place on under/over achievement of budget targets?

Management of operations/R&D
How is day to day work managed in your unit?
> *Probes*
> Are goals/objectives specified for employees?
> How clear are employees on what they are expected to do?

What are the impacts of the increased complexity of new environmental products and the increased number of new products?
> *Probes*
> Are there clear distinctive markets for different products?
> What challenges arise from focusing on old and new products?

How is the time of R&D staff split between new environmental products and old products?
> *Probes*
> Is there a strategy on the balance of products going forward?
> What systems are in place to protect time of R&D staff?

What method is used to cost new products?
> *Probes*
> How is the possible increased set up time for more complex environmental products taken into account in costing?
> How much is finance function involved in working out costs?

How do you measure the outcomes of work in your unit?
> *Probes*
> How are KPIs used to assess performance?
> How important are they for performance evaluations?
> Which KPIs are more important?

What is given attention in weekly meetings?
> *Probes*
> To what extent are numbers drawn on in discussions in the meetings?
> Are KPIs referred to in meetings?

Which ones get the most attention?

Interaction with top management
What information is reported to the Executive by your unit?
What kind of interaction takes place at executive meetings?
  Probes
  Which areas generate most discussion?

What are the key metrics that concern top management of division/group?
  Probes
  How is quantitative information used in meetings with top management?
  Do some functions rely on KPIs more than other functions?
Are there issues that regularly create frustration at meetings?

Interaction with finance (where relevant)
What are the key reports produced by finance function?
What has been the impact of any staff cutbacks on information provided?
  Probes
  Availability of information? Usefulness for decision making?
  Level of detail on variances?

What information is reported in monthly pack?
  Probes
  How satisfied are you with the information reported?
  Ability to see information on areas of concern?

Changes in controls/structure
Any recent changes?
Impact of business unit structure?
Importance of customer service?

Culture
How would you describe the culture of the division?
How is this culture nurtured?
  Probes
  How is the culture spread to new employees?
  Can you provide us with some examples of what would be typical of the culture?
Is there a mission/statement of values in the division?
  Probes
  How does it influence decisions?
  How are the values reinforced?

Overall questions
What are key successes of the division over last 5 year?
What factors have enabled these successes?

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Table 1: Summary of how a pragmatic perspective manifests in an organisation

Simpson & den Hond (2022) features	How a pragmatic perspective manifests in an organisation
Commitment to process	• Acceptance of life as inherently unpredictable; yet prediction and control possible (Dewey, 1929) • Concerned with problem-solving in face of uncertainty (Ansell and Boin, 2019) • Dynamic nature of interactions important in making sense of what can be expected from actions we take (Shields, 2008) • Ideas operate as tools to accomplish tasks and are drawn on/abandoned as needed (Baker and Schaltegger, 2015; Barnes, 2008)
Approach to knowledge	• What is confirmed through action is verified (James, 1898; 1897) • Truth of a statement relates to how useful it is for generating change (Baker and Schaltegger, 2015) and amelioration (Koopman, 2006) • Truths arise in empirical experience and process of knowing shapes this experience (Dewey, 1938; Simpson and den Hond, 2022) • Focus on action rather than endless debate (Shields, 2008) • Measurement focuses on 'adequate-to-purpose', rather than 'true' results (Micheli and Mari, 2014)
Orientation towards the future	• Meaning of present day actions lies in their future consequences (Pierce, 1878) • Means and ends are temporary and can be both considered as 'ends-in-view' (Dewey, 1939) • Ends that are sought grounded in reality of what is possible (Ansell and Boin, 2019)

Table 2: Summary of insights provided on how a pragmatic perspective is discernible in the form and use of MC practices

Simpson & den Hond (2022) features	How a pragmatic perspective manifests in an organisation	Evidence of how pragmatism is discernible in the form and use of MC practices
Commitment to process	• Acceptance of life as inherently unpredictable; yet prediction and control possible (Dewey, 1929) • Concerned with problem-solving in face of uncertainty (Ansell and Boin, 2019) • Dynamic nature of interactions important in making sense of what can be expected from actions we take (Shields, 2008) • Ideas operate as tools to accomplish tasks and are drawn on/abandoned as needed (Baker and Schaltegger, 2015; Barnes, 2008)	**Form**: Mutable local MC practices developed and abandoned as needed for problem solving (e.g., KPIs on customer calls). **Form**: MC practices unrelated to problem solving are absent (e.g., lack of formal mission and vision; no post investment appraisal). **Use**: MC practices focus on interactions and making sense of what can be expected from actions (e.g., strat plan number) **Use:** Strategic plan ideas abandoned if not seen as useful to drive action.
Approach to Knowledge	• What is confirmed through action is verified (James, 1898; 1897) • Truth of a statement relates to how useful it is for generating change (Baker and Schaltegger, 2015) and amelioration (Koopman, 2006) • Truths arise in empirical experience and process of knowing shapes this experience (Dewey, 1938; Simpson and den Hond, 2022) • Focus on action rather than endless debate (Shields, 2008) • Measurement focuses on 'adequate-to-purpose', rather than 'true' results (Micheli and Mari, 2014) in contrast to organisations where numbers are undisputed future projections and accuracy is sought (Mazmanian and Beckman, 2018)	**Form:** Corporate values articulated through local storytelling of successful actions **Form:** Lists of tasks and targets focussed on actions for performance evaluation. **Use:** Management not overly concerned about the representational truthfulness of targets (e.g., budget overruns, transport costs, complex manufacturing costs)
Orientation towards the future	• Meaning of present day actions lies in their future consequences (Pierce, 1878) • Means and ends are temporary and can be both considered as 'ends-in-view' (Dewey, 1939) • Ends that are sought grounded in reality of what is possible (Ansell and Boin, 2019)	**Form:** MC practices reflect absence of investment in any practices where there is no clear link to 'ends-in-view' (e.g. formal cultural controls or local MC practices used as defensive resources). **Form:** Local MC in the form of inventories of knowledge developed only where the knowledge clearly supports future consequences in terms of progress in achieving stated outcomes (e.g., Warranty claims). **Use**: Future-oriented numbers (e.g., targets, forecasts, reforecasts) valued over historical variance analysis. **Use:** MC practices used to assess progress in terms of trends and outcomes rather than deviations from past predictions.