

CURIOSITY AS A PRACTICE: A PRACTICE LENS PERSPECTIVE

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ABSTRACT

In this paper, we draw on extant studies about curiosity and practice to analyse and frame curiosity as a salient social practice for organizations. We go beyond the psychological applications of curiosity to consider the social practices of ‘doing’ curiosity. We draw on the strategy as practice (SAP) literature and propose a curiosity as practice (CaP) conceptual framework. We argue that CaP is enacted at the nexus of three practices—sociomateriality, discursivity and agency—collectively enabling CaP to engage and connect with other practice bundles, including decision-making, sensemaking and strategising. Finally, we discuss the implications of our conceptual research and suggest an agenda of empirical research aligned with the CaP conceptual framework.

Key words: Curiosity; curiosity as a practice; practice; sociomateriality; strategy as practice

Introduction

Past scholarly literature has largely identified curiosity as a psychological trait or state (Berlyne, 1954; Kashdan & Roberts, 2004; Lievens et al., 2022; J. Litman, 2019; Voss & Keller, 1983) that provides individuals with the necessary motivation to identify and fill knowledge gaps, ‘based on an underlying universal desire to know for its own sake, to make sense of the world.’ (Golman & Loewenstein, 2018, p. 38). In the work environment, psychology scholars generally agree that curiosity can be encouraged or discouraged as a salient behaviour depending on an organization’s approach to activities, such as creativity, innovation, sensemaking and decision-making (Chang et al., 2023; Chang & Shih, 2019; Gottlieb, 2017; Harrison & Dossinger, 2017; Weick, 1993). Consequently, discussion of curiosity in organizations has been dominated by the psychology literature (Gino, 2018; Kashdan, 2015; Lievens et al., 2022; Mussel, 2013; Reio & Wiswell, 2000), in which the emphasis has been primarily on individual curiosity (Kashdan et al., 2020; Lievens et al., 2022; Mussel, 2013).

Organizationally, outside a concern in psychology regarding what constitutes individual curiosity, curiosity occupies a puzzling space. An organizational dilemma has been noted in the work of Kashdan (2015) and Gino (2018) noting that while business leaders suggest they value curiosity, in practice it is stifled by them. Addressing this puzzle requires not a focus on curiosity as an individual trait but consideration of curiosity as a practice (Carlile et al., 2014; Nicolini, 2012; Schatzki, 2002, 2019) that organizations strive to discipline and use creatively in various ways. Hence, we argue for a reconceptualisation of curiosity as an organizational social practice (Gherardi, 2012; Nicolini, 2012; Schatzki, 2005). In doing so, we address three objectives. First, we conceptualize curiosity within a broader ‘practice turn’ (Schatzki et al., 2001). Second, we build a curiosity as practice (CaP) conceptual framework by drawing on the SAP framework of Whittington (1996, 2002, 2007) and Jarzabkowski et al. (2007). We identify three practices aligned with ‘the work, the workers and the tools’ (Whittington, 2002, p. C1) that we will argue are collectively essential considerations in forming a framework of CaP. Third, we suggest a research agenda for scholars to explore and consider the application and implications of the conceptual CaP framework in organizational settings. Finally, we consider the implications of a CaP framework before outlining future CaP research opportunities, including how the conceptual CaP framework interconnects with other practices (Carlile et al., 2014; Nicolini, 2012; Schatzki, 2002, 2019) to form part of a ‘constellation of practices’ (Schatzki, 2019, p. 3).

With this research, we make three contributions to the curiosity and the strategy as practice (SAP) literature. First, we conceptualize curiosity as an organizationally social and material practice. Second, we present scholars and practitioners with a CaP conceptual framework as a platform for future research. Third, our insights illuminate further opportunities for researchers to offer more in-depth analysis through empirical research.

The paper is structured as follows. We begin by conducting a systematic, integrated literature review (Denyer & Tranfield, 2009; Elsbach & van Knippenberg, 2020; Torraco, 2005; Tranfield et al., 2003). We follow the approach of Denyer and Tranfield (2009) and consider several methods of data search, including Web of Science, Google Scholar, and university library databases. The review aligns with the research question, ‘How can curiosity be considered a salient workplace social practice?’ To address this question, we build a comprehensive database of relevant research in two stages. First, we look at the curiosity literature through a psychological lens as a motivating behaviour associated with the individual (Berlyne, 1954, 1966; Kashdan, 2010; Kashdan & Roberts, 2004; Reio, 2008b; Reio & Callahan, 2004) and the behaviour of individuals in the work environment (Gino, 2018; Kashdan et al., 2020; Mussel, 2013). We next review the practice literature and consider the multifarious perspectives of practice theorists before synthesizing insights into curiosity and practice to develop a conceptual framework.

Literature Review Methodology

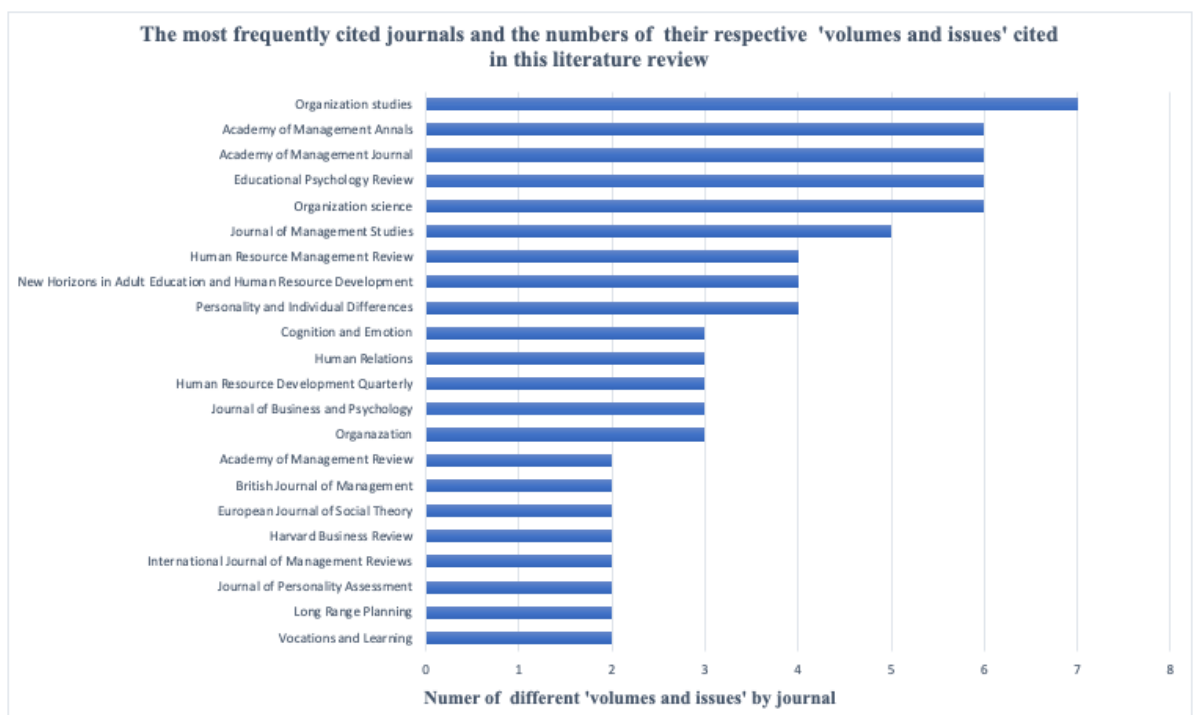
We followed a systematic review process with boundary criteria defining its scope (Denyer & Tranfield, 2009). Torraco (2005, p. 356) describes a systematic literature review as a form of research ‘that reviews, critiques and synthesizes representative literature on a topic in an integrated way such that new frameworks and perspectives on the topic are generated’. Our literature review follows a methodological approach outlined by Elsbach and van Knippenberg (2020). We focus on literature relevant to the development of a conceptual framework aligned to our research question as a boundary condition. We use protocol methodology, in addition to snowballing techniques (Callahan, 2014; Collien, 2021; Wohlin, 2014). Snowballing is described by Wohlin (2014) as the use of a reference list from an article or citations to identify additional articles. Further, snowballing provides a means of starting with articles that are judged to be relevant to the review; however, snowballing does not replace database searches (Callahan, 2014; Wohlin, 2014). We started our search initially using the Web of Science (WoS), with Boolean search terms including: ‘curio*’ AND ‘work*’, ‘curio* AND practice*’ and ‘Curio* AND work* AND practice*’ plus ‘curio*’ OR ‘inquisitiv*’ AND ‘work’. We then reviewed the Boolean search results for relevancy and

quality against the research question before eliminating articles considered out of scope (Denyer & Transfield, 2009).

To focus the search process, we identified three criteria for publications to be considered in scope (Torraco, 2016). First, we limited articles to those that have been peer-reviewed in journals that are well-cited according to the benchmarking of the Scientific Journal Ranking list (SJR, 2020). The most frequently cited journal articles and versions in this paper are identified in Figure 1. All relevant articles included one or more of the specified terms ‘curiosity’ or ‘workplace curiosity’ or ‘practice’. By doing this, we covered a broad range of literature that included psychology, social science and organization science. Second, all studies, including books and book chapters other than those of seminal authors, were required to have been published between 2000 and 2021. This was done to ensure relevance to recent scholarly work and insights. Third, research categories were restricted to practice- or curiosity-related literature. We then screened all publications to ensure they aligned with the specified search criteria.

Figure 1

High Impact Journals Most Cited in the Literature Review



We initially identified 144 curiosity and curiosity-related workplace publications through this process, including books and book chapters. The process was repeated to identify practice-based literature associated with the combination of curiosity and work, yielding 336 articles before editing and removal of irrelevant categories, initially generating a

total of 25 articles to be considered in scope. Conspicuously, we identified no articles explicitly related to curiosity *and* practice that fulfilled our in-scope criteria when using the WoS database. A similar null result was achieved for the same search criteria using Google Scholar advanced search (curiosity AND practice), although search articles were identified that did not meet the specified scope requirements.

A total of 70 publications were identified as in scope: 60 journal articles, seven books and three book chapters. Table 1 summarizes the quantity and typology of the literature review publications.

Table 1

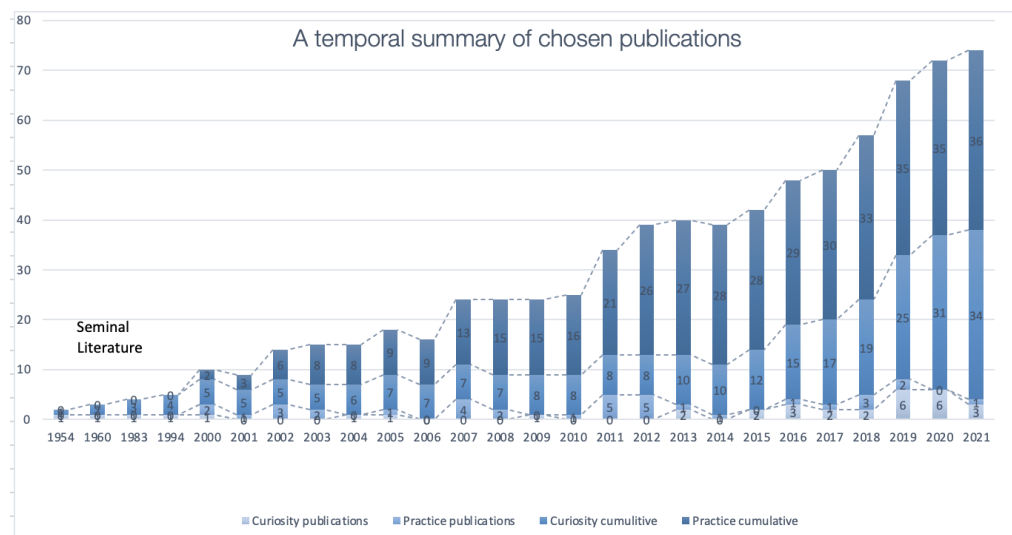
Integrated Literature Review Publication Mix

	Curiosity	Practice	Total
Journals	31	29	60
Books	2	5	7
Book chapters	1	2	3
Total	34	36	70

Figure 2 provides a temporal summary of the selected literature for this study. It identifies that 46 or 66% of the included publications were produced between 2011 and 2021.

Figure 2

A Temporal Summary of Literature used for Analysis.



Gathering Data

We followed an iterative literature review process to identify relevant curiosity and practice literature supporting our study (Denyer & Transfield, 2009). Doing so required we return to the chosen literature multiple times to review relevant studies, including those we had considered of marginal relevance. Google Scholar enabled the identification of data gaps not captured in the initial search process. We then compiled the in-scope data pool for curiosity related literature (see Appendix 1). Likewise, for the identified in-scope practice literature data pool (see Appendix 2). When satisfied with the search outcomes, we commenced a process of ‘clustering’ described by Miles et al. (2014, p. 279) as a way of understanding a ‘phenomenon better by grouping and then conceptualizing objects with similar patterns or characteristics’. However, such groupings are not always mutually exclusive and may overlap. Clustering supported the initial identification of articles through key words and by considering the relevance and richness of the article content. For example, the first cluster identified literature that focused on the ‘conceptualization of curiosity’. In this case, the literature included the theoretical definitions of curiosity, the typology of curiosity (e.g., state and trait curiosity) and epistemic and perceptual curiosity (Berlyne, 1954; Grossnickle, 2016).

Thematic analysis

We began our thematic analysis by reviewing the various approaches to curiosity and practice theory separately, using an inductive approach. Eisenhardt et al. (2016, p. 1113) define inductive methods ‘as those approaches through which researchers attempt to generate theory from data’. We initially coded the identified journal articles inclusive of the books and book chapters. Throughout this process, we scrutinized data by conducting multiple verification reviews to ensure accuracy (Tranfield et al., 2003) before applying a clustering process, which aligned literature using six broad clusters. According to Miles et al., (2020, p. 276) “Clustering is a tactic that can be applied at many levels to qualitative data: at the level of events or acts, individual participants, processes, settings/locales, sites or cases as wholes, time periods, and so on. In all instances, we’re trying to understand a phenomenon better by grouping and then conceptualizing [... data] that have similar patterns or characteristics” .

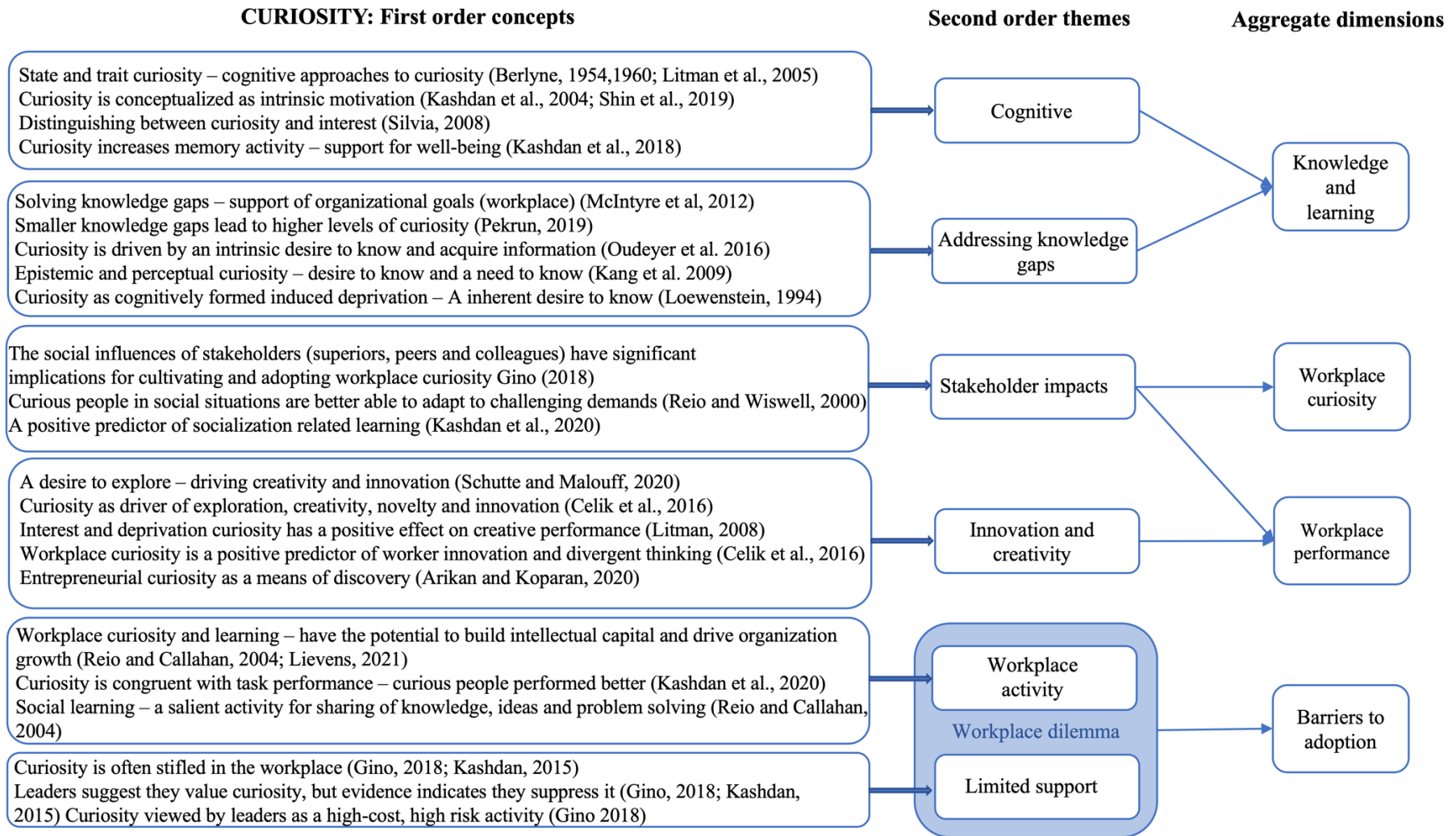
We used the Gioia methodology (Gioia et al., 2013) as an iterative inductive process, that assisted the development of our data structure and theoretical interpretations. By following this process, we reduced the list of the coded literature to a more manageable number of categories (Gioia et al., 2013), creating a conduit between the base data and the

first-order concepts (Nag, Corley, et al., 2007). The identified clusters resulted in six first-order concepts for curiosity (Figure 3) and the emergence of the data structure.

We then probed first-order concepts for alignment with the research question. The first-order concepts provided a means of identifying the emerging second-order themes and consolidating primary insights from the literature (Eisenhardt et al., 2016; Nag, Hambrick, et al., 2007; Simons, 2014). The emerging second-order themes were then iteratively reviewed to ensure accuracy, relevance and alignment with the datasets of the first-order concepts (Callahan, 2014; Gioia et al., 2013). Doing this identified the central themes as aggregated dimensions, which we labelled as knowledge and learning, workplace curiosity, workplace performance and barriers to adoption (of curiosity), (see Figure 3). The aggregated dimensions provided the insight necessary to construct our conceptual framework (see Figure 4).

Figure 3

Data Structure for Curiosity



Curiosity

Conceptualising Curiosity

Scholarly perspectives on curiosity are diverse. Viewed through a psychological lens, curiosity can be considered an innate human motivational state or trait (Berlyne, 1954, 1978; Grossnickle, 2016; Kashdan et al., 2013; Lievens et al., 2022; J. Litman, 2019; J. A. Litman & Silvia, 2006; Reio, 2008a). Framed philosophically, curiosity is a desire to know—an intellectual virtue (Gelfert, 2013; P.Harrison, 2001; McCall, 2011; Papastephanou, 2019; Zurn, 2018). From an educational perspective, curiosity is framed as being integral to pedagogical activities associated with learning and the gaining of knowledge (Ainley, 2019; Peterson & Hidi, 2019; Wergin, 2020). Neuroscientists strive to understand the cognitive aspects of curiosity (Baranes et al., 2015; Gottlieb, 2018; Gottlieb et al., 2013, 2016; Gruber et al., 2014). For engineers, curiosity is an element of machine knowledge essential in developing and enhancing robotic artificial intelligence across various applications (Gordon et al., 2018; Oudeyer et al., 2016). In the natural sciences, curiosity is the impetus for discovery and invention (Einstein, 1950; Luce & Hsi, 2015; Whitesides, 2018). We review curiosity by initially considering various psychological perspectives, as summarized in Figure 3, before we turn our attention to a practice theory-based approach, where we argue the saliency of CaP.

Insights from the curiosity literature

Knowledge and learning

Psychology theorists acknowledge that there is no consistent definition of curiosity but multifarious viewpoints resulting from various multidimensional considerations (Grossnickle, 2016; Lievens et al., 2022). Most commonly, curiosity is considered a motivational behaviour that stimulates exploration and learning (Berlyne, 1978; Dewey, 1910; J. A. Litman, 2005; Oudeyer et al., 2016; Voss & Keller, 1983; Weible & Zimmerman, 2016). Seminal work by Daniel Berlyne, a behavioural psychologist (Markey & Loewenstein, 2014), resulted in the publication of ‘A theory of human curiosity’ (Berlyne, 1954). Berlyne identified epistemic and perceptual traits of curiosity accepted by present-day theorists (Arikan et al., 2020; Lievens et al., 2022; J. Litman, 2019; Mussel, 2010; Reio, 2008b; Reio & Callahan, 2004). In terms of epistemology, epistemic curiosity constitutes an innately human ‘desire to know’ and acquire new knowledge (Berlyne, 1954, p. 187, 1966, 1978; Reio, 2008b). Berlyne argued that epistemic curiosity could be stimulated by ‘specific interrogation questions’ (Berlyne, 1954, p. 182), more widely known as focused open-ended or Socratic questions (Neenan, 2008). Questioning of this style provides a means of

information seeking and enables the identification of knowledge gaps (Berlyne, 1954; Loewenstein, 1994). For perceptual curiosity, Berlyne (1954) argues the need for arousal by novel stimuli, such as a new sound. However, this intrinsic drive diminishes when continuously exposed to the same stimuli.

In contrast to Berlyne, Loewenstein (1994, p. 75) argues that previous theoretical work did not adequately clarify why and on what occasions people are curious, suggesting a failure to delineate the situational determinants of curiosity. What needed to be explained was ‘the intensity of curiosity, transience, association with impulsivity and a tendency to disappoint when satisfied’. Loewenstein (1994, p. 75) argued for a new understanding of curiosity, ‘as a form of cognitively induced deprivation that arises from the perception of a gap in knowledge or understanding’. Loewenstein (1994) postulated ‘that curiosity develops when people become aware of a gap between what they know and what they don’t know’ (Markey & Loewenstein, 2014, p. 228).

The more recent work of Markey and Loewenstein (2014, p. 230–232) argues for an expansion of the initial knowledge gap theory and suggests three drivers of curiosity: (1) importance, where the more important and relevant the information to a person, the higher the level of their curiosity; (2) salience, which increases when a specific question is asked and declines rapidly when attention moves away from focusing on the information gap; and (3) surprise, which occurs when questions and their associated responses are incongruent, compared to what a person may expect within a given context (thus, incongruence may trigger or potentially reduce levels of curiosity).

Recent studies continue to advance the ‘knowledge gap theory’, as evident in the work of Pekrun (2019), who argues that increasing levels of intrinsic motivation serve to close a knowledge gap (Deci et al., 2017; S. H. Harrison & Dossinger, 2017; Maslow, 1943; Ryan & Deci, 2000). Moreover, Singh and Manjaly (2021) argue that the size or extent of the information gap regulates the level of a person’s intrinsic motivation to be curious, with narrow information gaps inducing greater levels of curiosity. The work of Loewenstein and that of Berlyne, while not providing insights into how curiosity can be practiced through the actions of multiple agents of an organization, offers essential insight necessary to consider the implications of curiosity in the workplace. Motivating and stimulating behaviours supportive of open and inquisitive minds are essential for information-seeking activity (FitzGibbon et al., 2020), creativity, innovation and an organization’s long-term success (Hardy et al., 2017; Harrison & Dossinger, 2017).

Workplace curiosity

A challenge to many organizations when confronting highly complex and ambiguous market-driven pressures is the depth of their organization's intellectual capital, considered by theorists as essential for building robust and resilient organizational performance (Johnson et al., 2003; Kashdan et al., 2020; Mention, 2012; Smith et al., 2010; Whittington, 2019; Wolfson & Mathieu, 2020). Intellectual capital can be described as 'the knowledge and knowing capability of a social collectivity, such as an organization, intellectual community, or professional practice' (Nahapiet & Ghoshal, 1998, p. 245). Building and enhancing intellectual growth in organizations requires encouraging learning-related activities, such as posing open and often challenging questions that stimulate inquisitive behaviour and result in new insights and knowledge (Gino, 2018; Kashdan, 2015; Reio Jr & Wisell, 2000). Weick (1993) claims that when organizations experience turbulence and instability, answers are required for which curiosity provides necessary insights to adapt and learn. By encouraging such an approach, decision-makers within organizations seek to instill a practice of curiosity that supports the recognition of creative solutions and the closing of knowledge gaps to support organizational performance (Chang et al., 2023; Chang & Shih, 2019; Friston et al., 2017; Mussel, 2013). Yet, according to Chang and Shih (2019, p. 1), the extant literature does not clarify what stimulates 'employee professional curiosity, or ... how, why and when, work-related curiosity influences creative performance' (Hardy et al., 2017). Nevertheless, the relationship between curiosity as a source of learning and knowledge in the workplace is well established by scholars (Berlyne, 1954; Lievens et al., 2022; Wade & Kidd, 2019).

Workplace performance

A survey study of N = 480 participants conducted by Celik et al. (2016) suggested that work-related curiosity is a positive predictor of worker innovation and workplace performance. They claimed that curious employees are inclined to think divergently (p. 1190), which is consistent with previous studies emphasizing the salience of curiosity as a motivating behavioural stimulus for exploration (Kashdan et al., 2004, 2009). Likewise, Mussel (2013), from his study of N = 320 job-related demands, found that curiosity has a significant effect on a person's level of task performance.

Broad scholarly agreement is evident regarding the definition of epistemic curiosity as the 'desire for new information that motivates exploratory behavior and knowledge acquisition' (Berlyne, 1954; Litman et al., 2005, p. 559). When encouraged in the work environment, epistemic curiosity provides a means to enhance learning, increase knowledge and subsequently improve job performance (Arikan et al., 2020; Reio & Callahan, 2004; Reio

& Wiswell, 2000). However, for epistemic curiosity to flourish, enthusiastic support for focused open questioning and time for reflection and thinking is required (Reio & Wiswell, 2000). Kashdan et al. (2020) concluded, from research into organizations in the United States and Germany, that by developing and supporting workplace curiosity, organizations enrich their work environments and create behavioural benefits that embrace job satisfaction, worker engagement, wellbeing and a positive approach to innovative activities.

Barriers to Adoption

Curiosity in the workplace can often be paradoxical in practice, where leaders espouse the virtues of curiosity but simultaneously discourage its application (Gino, 2018; Kashdan, 2015; Merck, 2016). The discouraging of curiosity is evident in findings that emerged from Gino's (2018) research that suggested 24% of respondents reported feeling curious in their jobs. However, 70% reported that they faced barriers to asking questions (Gino, 2018, p. 48). Moreover, Gino's findings indicate that leaders believe employees will be more challenging, more demanding to manage and subsequently increase a firm's operational costs if curious minds are encouraged. To address such leadership challenges, Gino (2018) recommends that curiosity can be encouraged by a firm's leaders in five ways:

1. Enable hiring policies that seek to employ people with enquiring minds.
2. Leaders of organizations should act as role models by demonstrating inquisitive behaviour, including asking probing questions.
3. Develop organizational learning goals that support the application of curious and enquiring minds.
4. Encourage people within the organization to explore and broaden their interests through curiosity.
5. Arrange days that encourage *increased levels of focus on curiosity* and questioning.

Similarly, Kashdan's (2015) empirical study of Merck (2016) suggests little encouragement for inquisitive minds and proactive questioning in a top-down approach to decision-making based on a similar size international survey of n=3,000 conducted in Germany, U.S.A. and Japan. Kashdan's (2015) results identified three steps that he

considered critical to promoting and improving curiosity in the workplace. His suggested initiatives included:

1. A need to encourage leaders to stimulate ‘questioning’. For example, how can the work environment be more productive? What can be done to create a more effective and productive team?
2. Leaders should *emphasize the power of observation* in the workplace. Observation can aid and support curiosity and subsequently lead to the stimulation of ‘probing’ questions (Berlyne, 1954).
3. Leaders should *actively seek different perspectives, including listening and considering the voices of minorities*. In this way, all ideas are heard, and no worthy idea is missed.

The insights from Kashdan’s (2015) research closely reflect the results of Gino (2018) and reinforce the primary initiatives necessary to encourage curiosity in the workplace. Collectively, these survey results indicate a consistent preference for established safe ideas over potentially higher risk novelty. Consequently, when employees are encouraged to implement supportive actions, they are more likely to ask meaningful questions that identify and solve emergent problems (Wergin, 2020). Berlyne (1954) emphasized the saliency of questioning, which he referred to as ‘probes’ for stimulating and encouraging curiosity. Asking open questions provides a powerful means of generating social interaction that supports exploratory behaviour, testing options, providing feedback, and offering a way to empower employees to be curious (Harrison & Dossinger, 2017).

In sum, we have drawn from the extant curiosity literature four recurring themes. First, curiosity identifies and enables the closing of knowledge gaps creatively (Golman & Loewenstein, 2015; Gottlieb, 2018; Loewenstein, 1994). Second, curiosity has the potential to identify and solve problems through open and exploratory questioning (Berlyne, 1954, 1966, 1978; Gino, 2018; Kashdan, 2010; Kashdan et al., 2020; Reio and Wiswell, 2000). Third, leaders need to accept and understand curiosity’s salience as a powerful organizational practice (Gino, 2018; Kashdan, 2015; Reio, 2008). Fourth, encouragement and support for open and inquisitive minds is required for curiosity to flourish (Gordon, 2018; Mumford et

al., 1993; Voss & Keller, 1983). However, current evidence suggests that curiosity is not always encouraged or practiced (Gino, 2018; Kashdan, 2015). Next, we explore a practice approach to curiosity. We commence by summarizing the salient insights from the extant practice literature.

Bringing in practice literature

The salience of practice

Theorists generally agree that the roots of practice theories are significantly influenced by the seminal work of Max Weber (1864–1920) and his ‘Theory of social action’ (Bourdieu, 2013; Nicolini, 2012; Reckwitz, 2002; Schatzki et al., 2001). Yet, most scholars posit that there is no unified view of a practice approach (Feldman & Worline, 2016; Gherardi, 2012; Nicolini, 2012; Schatzki, 2005, 2018; Schatzki et al., 2001). Instead, there are a range of theories and an assortment of views (Loscher et al., 2019; Schatzki, 2005). Nicolini (2012, p. 9) argues for the consideration of various practice approaches in combination rather than creating a ‘grand synthesis’, encouraging scholars to learn from various viewpoints. For Reckwitz (2002), the significance of the ‘practice turn’ is in its inherent relationship with the ‘everyday life world’, central to an ‘action theory’ approach. Likewise, Feldman and Orlikowski (2011) emphasize the ontological significance of everyday activity and the corresponding need for theorists to understand how dynamic activities are manifested and understood over time and space through the actions of people and materials.

The power of practice theory is its capacity to support our understanding of human social existence, everyday human activity and the value of the ordinary, considered in the context of past, present and future perspectives (Jarzabkowski, 2003; Nicolini, 2017). Social practice is an enduring activity that emerges through the recurrent actions of people (Nicolini, 2012). A growing body of work in organization studies expands the understanding of practices related to strategy (Jarzabkowski, 2005; Jarzabkowski et al., 2007; Jarzabkowski & Spee, 2009; Vaara & Whittington, 2012; Whittington, 1996, 2006; Whittington et al., 2003), knowledge and neo-institutionalism (Feldman & Orlikowski, 2011). Notably, the connectedness of ‘doing’ and ‘action’ provides the essence of practice as an everyday routine and practical activity (Schatzki, 2019).

For organizations, practice includes the way work gets done, which involves a range of activities, such as learning, strategising, group sessions and meetings, that are central to the way organizations work and function (Whittington, 2002). Moreover, scholars recognize that organizations are bound by material forms and spaces that intertwine with the actions of

people. Hence, materials in their various forms, such as technology, have become inextricably connected within the many ways organizations operate (Gherardi, 2012; Nicolini, 2012; Orlikowski, 2007; Orlikowski & Scott, 2008).

Social and material practice

A broadening of the practice lens is attributed to the work of Orlikowski (2007) and Orlikowski and Scott (2008), who postulate that the social and material elements of a practice approach form a constitutive entanglement in which the social and the material become bound as a sociomaterial practice in which, theoretically, neither the human nor the material is privileged in everyday organizational life (Orlikowski & Scott, 2008). The theoretical roots of sociomaterial practice are associated with scholars such as Callon (1986) and Latour (2005) through actor network theory (ANT), which postulates that the agency of humans and non-humans is of equal standing. Materiality in this context is not limited to the tangible but also includes the intangible, such as software, data and algorithms. Materiality, therefore, is not limited to the physical aspects of work or how work is accomplished (Jones, 2013; Leonardi & Barley, 2010).

The notion of intertwining and interconnectedness of people and material is reflected in the earlier work of Reckwitz (2002, p. 249), who described:

a practice (Praktik) [as] a routinized type of behaviour which consists of several elements interconnected to one other: forms of bodily activities, forms of mental activities, ‘things’ and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge.

Conspicuously, Reckwitz acknowledges the saliency of knowledge as integral to social practice, a position generally recognized by scholars who postulate knowledge emerges through people’s participation in activities and their relationships and actions when they partake in everyday life and routines (Brown & Duguid, 2001; Nicolini, 2011; Wenger, 1998).

Knowledge and learning a practice approach.

The relevance of the social actions of people is reflected in the notion of society as a ‘powerful system’. Nicolini (2017) postulates that society can be made and undone through human action and interactions because social systems are composed of arrays that facilitate acquiring knowledge and meaning through discursive practice. In practice, knowledge is ‘a way of knowing’ that is shareable with others (Gherardi, 2019; Reckwitz, 2002). In this

context, knowledge is considered a mastery gained through learning and discourse supported by social and material activity (Nicolini, 2011; Orlikowski & Scott, 2008). Newly acquired knowledge is achieved by learning and understanding existing practices and considers ‘how to speak (and what to say) ... how to feel, what to expect and what things mean’ (Nicolini, 2012, p. 5). As such, knowledge is considered a salient practice in terms of knowing and doing (Gherardi, 2000; Gherardi et al., 2007; Nicolini, 2011, 2012; Schatzki, 2002). The profound role of knowledge is to provide ways of ‘doing’ and ‘saying’, enabling people to go on with everyday activities. The result is the construction of society and social systems contributing to humanity’s continuing and often conflicted existence (Nonaka, 1994, 2007). For organizations, knowledge is considered ‘a form of social expertise and collective knowledgeability’ that contributes to the salience of practice in the workplace (Nicolini, 2011, p. 602).

Workplace social practice

Conceptually practice in the workplace can be described as ‘embodied materiality mediated arrays of human activity’ centrally organized around shared practical knowledge (Schatzki, 2005, p. 2). Practice from this perspective considers how the social aspects of life ‘tend to work’ and subsequently ‘how work gets done’. As such, practices are formed and applied in the way people accomplish everyday life (e.g., painting a house, repairing a car or making strategic decisions) (Whittington, 2018). The study of workplace practice reflects the role of workers, sociomaterial and symbolic bodies carrying out the praxis of work through social and technological interactions (Orlikowski & Scott, 2008; Schatzki, 2002). In this context, workplaces and the study of work as knowledgeable practices provide an essential understanding of how social and material interactions are maintained and translated over time and space (Price et al., 2009).

One challenge to practice theorists is an absence of epistemological unity, which, according to Nicolini & Monteiro (2017, p. 111), has resulted from an interconnected ‘broad family’ of historical yet conceptually similar definitions with which practice scholars ‘praxeologise their object of enquiry’ in distinct ways. From such multifarious perspectives, practice theory provides scholars with a generic array of social options that consider how things are accomplished and get done (Barnes, 2005; Schatzki, 2005).

Synthesising curiosity and practice theory

In the following sections, we synthesize insights from the practice and curiosity literature to develop a conceptual framework in which curiosity is considered a social practice with the potential to enhance knowledge and understanding of social and

organizational phenomena (Nicolini & Monteiro, 2017). We reflect on the practices of sensemaking (Maitlis, 2005; Maitlis & Christianson, 2014; Weick, 1995), strategizing (Jarzabkowski, 2003; Jarzabkowski et al., 2019; Vaara & Whittington, 2012; Whittington, 1996, 2006, 2007, 2019; Whittington et al., 2006) decision-making practice (Allison & Zelikow, 1999; Burgelman et al., 2018; Cabantous & Gond, 2011; Hendry, 2000; Langley et al., 1995; Villar et al., 2018) and consider these as ‘bundles’ of practices that can interconnect with other practices (Gherardi, 2012; Loscher et al., 2019; Schatzki, 2019; Shove et al., 2012). In this context, practices are not isolated; as we will discuss, many interconnect to form larger nexuses and bundles that result in constellations of practices (Schatzki, 2019, p. 3).

A practice approach to curiosity

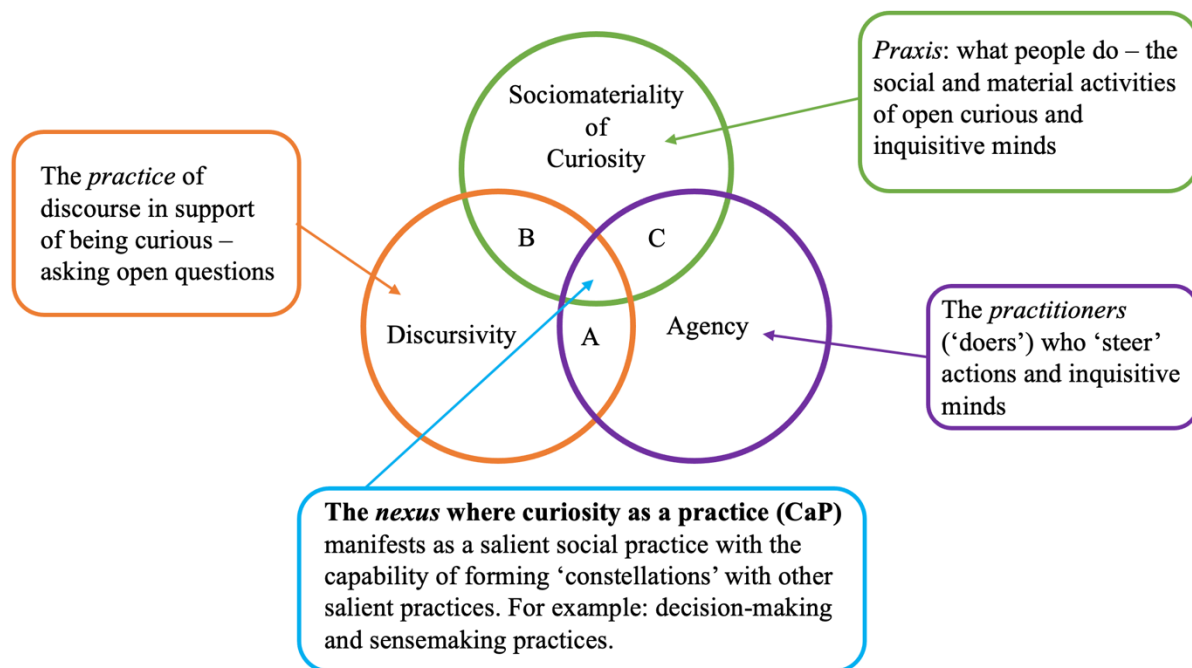
A growing body of scholarly literature suggests that the metaphysical and psychological aspects of curiosity are often explored at the individual or micro level (Kashdan et al., 2020; Lievens et al., 2022), while research at the macro or organizational level is sparse (Gino, 2018; Kashdan et al., 2020; Lievens et al., 2022). Therefore, we argue that curiosity (Berlyne, 1954, 1966; Golman & Loewenstein, 2018b; Litman et al., 2005; Loewenstein, 1994; Voss & Keller, 1983), when enacted by the actions of people in support of their everyday work-related activities, provides a practical means of ‘doing’ (Bourdieu, 2013; Feldman & Orlikowski, 2011; Nicolini & Monteiro, 2017). ‘Doing’ in this context forms a social practice that relies on the intertwining of social and material practices to accomplish work (Gherardi, 2012; Orlikowski, 2007; Orlikowski & Scott, 2008). For example, the practice of sensemaking is regarded as a salient supportive practice in organizations when making strategic decisions (Balogun et al., 2014; Maitlis & Christianson, 2014; Nutt, 2010). As such, decision-making and sensemaking form a nexus of social practice (Nicolini, 2012; Schatzki, 2002, 2005b). Developing such a nexus leads to better understanding and more effective quality decision-making outcomes (Balogun et al., 2014). Nexuses of practice are described by Nicolini (2012, p. 205) as being ‘perpetuated in time through repetition and institutionalization’. An example may include a university lecture, where the lecturer is required to register attendance, provide lecture notes and support students with in-class presentations. These activities form a nexus of practice. As we will discuss in the next section, a nexus of practices plays a role in developing the CaP conceptual framework.

Developing a conceptual curiosity as practice framework

In this section, we build a conceptual framework from three elements of a theory of practice proposed by Whittington (2002): praxis (the work), practitioners (the workers) and practice (discourse). We then draw upon the extant literature and the SAP conceptual frameworks of Jarzabkowski (2003, 2005; Jarzabkowski et al., 2007; Jarzabkowski & Spee, 2009) and Whittington (1996, 2002, 2007, 2017) that collectively provide the insights from which we form the structure of the CaP framework (Figure 4).

Figure 4

A Conceptual Framework for Curiosity as a Practice (CaP)



We argue that CaP manifests at the nexus of sociomateriality (praxis), agency (practitioners) and discursivity (accounting for, through and by practices). A, B and C represent more intense levels of focus at each of the interconnections (Jarzabkowski et al., 2007, p. 11).

First, we refer to 'the work' as praxis, consisting of the interrelated actions of 'doing', 'saying' and 'relating' (Jones, 2013; Orlikowski, 2007; Orlikowski & Scott, 2008; Schatzki, 2010). According to Kemmis (2012, p. 150; Kemmis & Smith, 2008, p. 4), 'praxis' is 'what people do when they take into account all the circumstances and exigencies that confront them at a particular moment and then taking the broadest view, they act'. Reckwitz (2002, p. 249) captures the notion of praxis as 'an emphatic term to describe the whole of human

action'. Jarzabkowski et al. (2007) argue that praxis is an embedded, dynamic and fluid concept within institutions that can be operationalized through social interactions at various levels of an organization. To understand the praxis of curiosity, we refer to the sociomateriality (Gherardi, 2000, 2012) of being curious. Orlikowski (2007, p. 1437) describes sociomateriality as 'not privileging either humans or technology (in one-way interactions). Instead, the social and the material are inextricably related – there is no social that is not also material and no material that is not also social'. Accordingly, we consider the social and material aspects of curiosity as a praxis (Jarzabkowski et al., 2007; Whittington, 2002) that identifies and closes knowledge gaps through social and material inquiry. We identify this 'doing', as the sociomateriality of curiosity.

Second, we consider human agency in respect of those who 'do the work' (Giddens, 1984). Organization executives are typically the agents involved in decision-making processes. Agency, according to Giddens' (1984) 'structuration theory' describes how a difference can be made through actors' everyday social activities and events and accomplished through capabilities and affordances. Human agency requires knowledgeability and cognitive flexibility, which are necessary to participate in intelligent, active practices (Nicolini, 2012). Human agencies perform the doings and sayings that support practices (Caldwell, 2012; Schatzki, 2002). Putnam & Cooren (2004, p. 327) define human agency as 'allowing for meaning and coordinated action, ... where agents foster reflexivity, steer actions, and conform to known routines without depending on intentionality or purpose to drive organizing'. Human agency provides an essential intellectual inquisitiveness to the CaP conceptual framework.

Third, discourse in the conceptual CaP framework is considered a practice 'tool' (Whittington, 2007). The agents of an organization use discursivity in the form of talk and text to support and enable interactions with internal and external organizational stakeholders, including organizational peers, subordinates and suppliers. They do so in the 'material' form of text, such as documents, emails, manuals and various forms of recorded media (Alvesson & Kärreman, 2011; Marshak & Grant, 2008). However, the scholarly meaning of discourse and discursivity remains contentious and problematic (Alvesson & Kärreman, 2011; Kuhn & Putnam, 2016; Schatzki, 2002). Foucault (1970, p. 115) refers to meta-discursive formations as 'a group of statements that belong to a single system of formation', such as 'clinical discourse, economic discourse, the discourse of natural history'. Everyday discourse, considered as a social practice (Fairclough, 2005), rather than as 'structuralist, semiotic and

poststructuralist conceptions' (Schatzki, 2001, p. 10), is a much more mundane but still skilled accomplishment in its discursivity (Garfinkel, 1967).

Reckwitz (2002) argues that a discursive practice must be more than the various related communication indicators and is not restricted to speech acts. Instead, discursive practice is formed from bodily patterns and 'routinised mental activities' that inform our understanding and know-how. As such, discursive practices can be viewed not in ways that represent the world but as interventions that act on the world (Nicolini, 2012). According to Hardy et al. (2000), agents do not merely create discourse as a means of supporting their immediate requirements. Instead, discourse is developed within a meaningful context of discursivity as a way of shaping and constructing action. Discursivity in the context of CaP provides the ways and means for agents to provide connection and engagement that considers various and often diverse world views, usually but not always through 'mutual respect, trust and authentic understanding' (Wergin, 2020; Yorks & Kasl, 2006, p. 61). Discursivity is an integral practice that enables clarity of meaning and understanding that assists with identifying and closing organization knowledge and information gaps (Gherardi, 2000, 2019; Nicolini, 2017).

From these collective insights, we have argued that the core elements of a conceptual CaP framework are (1) sociomateriality of curiosity (praxis), (2) agency (practitioners) and (3) discursivity (accounting for, through and by practices). The nexus of these three core elements (see Figure 6) is where CaP can manifest and provide a practice capable of interconnecting and forming 'constellations' with other practices (Gherardi, 2000, 2012; Schatzki, 2019).

We summarize each of the practice elements of the CaP conceptual framework in Figure 4 as follows:

Sociomateriality of curiosity (praxis ... what people do). In the context of CaP, praxis refers to the social and material routines necessary to operationalize people and groups at various levels of an organization. In this way, people interconnect and solve intellectual challenges, identify new opportunities and make choices in support of an organization's strategic goals. Agents of an organization do this by inherent social inquisitiveness (curiosity) and acquired intellectual capital, including the social and material practices necessary to enable practical discursive activities. They do so through meetings, artefacts and technologies, including computers, software, whiteboards, e-mails, mobile phones and other material objects, such as pencil and paper. In this way, praxis provides a meaningful way for

people and materials to interconnect organizationally over space and time (Gherardi, 2012; Schatzki, 2019).

Agency (practitioners ... 'doers'), in the plural, strives to identify knowledge gaps, solve intellectual problems and identify novel solutions to support organizational goals and objectives. The role of managerial agency in supporting CaP is to encourage people to be inquisitive, identify and reflect on novel insights, learn and gain new knowledge and subsequently identify potential solutions while supporting present routines that are essential to achieve an organization's goals and objectives.

Discursivity (practices ... tool) provides the means of connecting social actions of human agents striving to search for and articulate new knowledge and clarify meaning and insights that build social frameworks of trust between agents. Discursivity achieves such outcomes through the social 'practices of talk, text, writing, cognition and argumentation' (Clegg, 1998, p. 29). In this way, discursivity provides the agents of an organization with a means to be relatable when they consider a common purpose. Consequently, discursivity provides a practical way to establish a basis for action when responding to a mixed social and material environment (Putnam & Cooren, 2004; Taylor & Robichaud, 2004).

The nexus formed from the three outlined practices is where CaP emerges as a salient organizational practice. Moreover, each of the activities within the CaP conceptual framework (see Figure 4) can operate outside the framework as discrete practices. Yet, within the conceptual CaP framework, each practice interconnects, such that it is not possible to consider each without considering and drawing on the various characteristics of the others (Jarzabkowski et al., 2007).

The nodes occurring at A, B and C in Figure 4 are indicative of potentially more intense interconnections: for example, at 'A', where discourse and agency form a nexus. In such cases, according to the work of Jarzabkowski et al. (2007) and similar reference to the SAP framework, such connections require empirical researchers to investigate the potential implications of these focal points separately.

Discussion

Defining curiosity as a practice

Having considered the psychological definitions of curiosity, we build on the work of Grossnickle (2016, p. 37), who, following an extensive literature review of curiosity definitions and dimensionality, identified various core themes of curiosity across the psychological literature, including a need for knowledge, exploratory behaviour, collative variables and emotions and arousal. We have additionally considered the practice literature

and the conceptual CaP framework construct and identified sociomateriality as the dominant enabling praxis. We subsequently define organizational CaP as a sociomaterial embedded practice of enquiry directed towards acquiring new knowledge in support of an organization's goals and objectives. By taking this view, we argue that our integrated CaP definition provides a practice-based approach with pragmatic organizational meaning and relevance.

Building a pragmatic praxis view of curiosity

We have explored a practice view of curiosity by focusing our attention on the role of curiosity in the workplace. With the aid of an integrated literature review, we have established that curiosity is most often viewed through an individual-focused psychological lens (Kashdan et al., 2020; Lievens et al., 2022; Litman, 2005; Mussel, 2013; Reio & Callahan, 2004). Consequently, psychology generally regards curiosity in the workplace as a motivator of worker engagement, innovative behaviours, job performance, job satisfaction and wellbeing (Kashdan et al., 2020; Lievens et al., 2022; Reio & Wiswell, 2000). Psychology scholars have demonstrated evidence of significant challenges to the adoption of curiosity in organizations, as is apparent in Gino's (2018) and Kashdan's (2015) research results that suggest curiosity is frequently not looked upon favorably by organizational leaders because of questionable economic reasoning. Nevertheless, leaders advocate its virtues (Kashdan, 2015).

Psychology scholarship does not have a monopoly on discussions of curiosity, despite its predominance. To this end, we have adopted a practice theory lens perspective on curiosity to gain a more socialized view, in which curiosity is framed as a sociomaterial practice reliant on the people and material elements of an organization (Gherardi, 2012). In the context of CaP, materiality consists of those elements (e.g., computers, spreadsheets and whiteboards) that aid the inquisitiveness of an organization's agents through discursive activities that stimulate questioning and listening (Harrison & Dossinger, 2017).

To identify the epistemological and social perspectives of curiosity, we have considered the rich data identified in our integrated literature review and the salient insights that form our understanding of a practice approach to curiosity. We first consider the data in Appendix 1 and Appendix 2. We subsequently identify primary aggregate dimensions, as summarized in Figure 3, for the data structure of curiosity. From these insights, we build our conceptual CaP model (Figure 4) by drawing on the SAP framework of Whittington (1996, 2002, 2007) and Jarzabkowski (2005; Jarzabkowski et al., 2007). The conceptual CaP framework (Figure 4) shows the discrete elements of a practice-based view of curiosity by considering the role of each element of the conceptual framework separately: curiosity as a

sociomaterial praxis, agency and discursivity, which collectively form a nexus that we refer to as CaP.

Theoretical contributions

We make theoretical contributions to organizational and practice theory by moving the lens of curiosity from a psychologically motivated behaviour of the individual (Kashdan et al., 2018; Reio & Wiswell, 2000) to a salient social practice, which multiple people within organizations engage in (Schatzki, 2019). CaP, from this perspective, involves inquisitive activities that identify and solve an organization's intellectual and knowledge challenges (Loewenstein, 1994). By applying a practice lens to curiosity, we transition curiosity research into a social science practice and provide scholars with a platform for developing insight into inquisitive organizational practices.

Next, we contribute to practice literature through the CaP model demonstrating that CaP manifests at the nexus of three core elements that include, 1) Agency (the 'doers') or practitioners of the social practice (Giddens, 1984) of being curious. 2) Discourse (the practice) (Kuhn and Putnam, 2016; Alvesson & Kärreman, 2011; Clegg, 1998) of being curious through socially engaging open questions. 3) Sociomateriality (the praxis) the work that 'gets done' with through social and material means (Reckwitz, 2002; Gherardi (2012). Collectively, forming a bundle of practice elements with the potential to align with other practices. For example, strategy as practice (SAP), or strategic decision-making bundles. In this way, CaP supports the building and interconnecting of constellations of practices with the potential to enhance organizational practice and activity.

Finally, this paper provides preliminary insights necessary for scholars to consider future more in-depth empirical scholarly research options. We argue that a practice-based view of curiosity in the work environment has much to offer scholars and practitioners.

Future research and limitations

In the context of this theory-based paper, we have raised a conceptual view of CaP based on insights gained from a systematic literature review. However, future empirical studies will need to provide a more robust analysis and consider potential future challenges relating to the adoption of CaP. Critical empirical research that considers the practices we have identified as constituting the CaP conceptual framework is required, identifying other micro-practices that support the 'doing of curiosity' and its potential to form 'constellations' with other salient practices.

Considering these insights, we believe there is an opportunity to explore how CaP can be organizationally applied with the assistance of various practice tools and approaches. For

example, what learning tools will be required by an organization to support the adoption of CaP? How could organizations learn from resistance to these (if any)? What other compelling benefits or obstacles to the adoption of CaP can be identified? Having suggested paradoxical tensions associated with the valorization and suppression of CaP, what other paradoxes may be relevant? Responses to such questions provide a potential impetus to advance curiosity as a salient social practice in organizations.

Conclusion

In concluding this paper, we have considered ontological and epistemic perspectives on curiosity in the workplace, initially through a psychological lens where insights from the extant literature have identified curiosity as a motivating state or trait supportive of the identification of knowledge gaps. Psychology literature focuses on the behaviours of the individual and not the social practices generally experienced by multiple agents related to an organization. By applying a social practice lens, we viewed curiosity as an organizational practice supporting what curious agents ‘do’ in organizations through their discursive ‘say’ in social and material practices.

We have argued that transitioning from a psychological to a practice-based lens will provide a pragmatic orientation to curiosity. As such, we have considered the broader social activities of agents and their curiosity-based practices. We developed a CaP conceptual framework that draws on the SAP literature and, in doing so, considers the nexus of the sociomateriality of curiosity, agency and discursivity as three interconnected practices forming CaP. Curiosity, when considered as a salient organizational practice, might provide organizations with access to untapped intellectual resources.

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Appendices

Appendix 1

Curiosity Data Pool

Author	Year	Journal or book or chapter	Relevance
Ainley, M.	2019	<i>Educational Psychology Review</i>	Curiosity and Interest: Emergence and Divergence.
Arikan, A. M., Arikan, I., & Koparan, I.	2020	<i>Academy of Management Review</i>	Creation Opportunities: Entrepreneurial Curiosity, Generative Cognition, and Knightian Uncertainty
Berlyne, D. E.	1954	<i>British Journal of Psychology</i>	A theory of human curiosity
Berlyne, D. E., & Frommer, F. D.	1966	<i>Child Development</i>	Some determinants of the incidence and content of children's questions.
Berlyne, D. E.	1978	<i>Motivation and Emotion</i>	Curiosity and learning
Celik, P., Storme, M., Davila, A., & Myszkowski, N.	2016	<i>Journal of Management Development</i>	Work related curiosity positively predicts worker innovation.
Chang, Y. Y., & Shih, H. Y.	2019	<i>Human Resource Management Review</i>	Work curiosity: A new lens for understanding employee creativity
FitzGibbon, L., Lau, J. K. L., & Murayama, K. (2020),	2020	<i>Current Opinion in Behavioral Sciences</i>	The seductive lure of curiosity: information as a motivationally salient reward.
Gino, F. (2018).	2018	<i>Harvard Business Review</i>	The Business Case for Curiosity
Golman, R., & Loewenstein, G.	2015	<i>Ssrn</i>	Curiosity, Information Gaps, and the Utility of Knowledge
Golman, R., & Loewenstein, G.	2018	<i>Decision</i>	Information gaps: A theory of preferences regarding the presence and absence of information
Gordon, G.	2018	<i>The new science of curiosity: Psychology of emotions, motivations, and actions (Book)</i> Nova Science Publishers	The science of curiosity
Gottlieb, J., Lopes, M., & Oudeyer, P.-Y.	2016	In Recent Developments in Neuroscience Research on Human Motivation. <i>Advances in Motivation and Achievement</i> ,	Motivated Cognition: Neural and Computational Mechanisms of Curiosity, Attention, and Intrinsic Motivation.
Grossnickle, E. M.	2016	<i>Educational Psychology Review</i>	Disentangling Curiosity: Dimensionality, Definitions, and Distinctions from Interest in Educational Contexts.
Hagtvedt, L. P., Dossinger, K., Harrison, S. H., & Huang, L.	2019	<i>Organizational Behavior and Human Decision Processes</i>	Curiosity made the cat more creative: Specific curiosity as a driver of creativity
Hardy, J. H., Ness, A. M., & Mecca, J.	2017	<i>Personality and Individual Differences</i>	Outside the box: Epistemic curiosity as a predictor of creative problem solving and creative performance
Harrison, S. H.	2013	<i>The Oxford handbook of positive organizational scholarship</i> (pp. 110–124). Oxford University Press.	Organizing the Cat? Generative aspects of curiosity in organizational life
Harrison, S. H., & Dossinger, K.	2017	<i>Academy of Management Journal</i>	Pliable Guidance: a Multilevel Model of Curiosity, Feedback

Author	Year	Journal or book or chapter	Relevance
			Seeking, and Feedback Giving in Creative Work.
Hidi, S. E., & Renninger, K. A.	2020	<i>Current Opinion in Behavioral Sciences</i>	On educating, curiosity, and interest development
Kang, M. J., Hsu, M., Krajbich, I. M., Loewenstein, G., McClure, S. M., Wang, J. T. Y., & Camerer, C. F.	2009	<i>Psychological Science</i>	The wick in the candle of learning: Epistemic curiosity activates reward circuitry and enhances memory.
Kashdan, T..	2015	<i>Harvard Business Review</i>	Companies value curiosity but stifle it anyway
Kashdan, T., Rose, P., & Fincham, F. D.	2004	<i>Journal of Personality Assessment</i>	Curiosity and exploration: Facilitating positive subjective experiences and personal growth opportunities
Kashdan, T., Goodman, F. R., Disabato, D. J., McKnight, P. E., Kelso, K., & Naughton, C.	2020	<i>Personality and Individual Differences</i>	Curiosity has comprehensive benefits in the workplace: Developing and validating a multidimensional workplace curiosity scale in United States and German employees
Lievens, F., Harrison, S. H., Mussel, P., & Litman, J. A.	2022	<i>Academy of Management Annals</i>	Killing the Cat? A review of curiosity at work
Litman, J. A.	2019	<i>The Cambridge Handbook of Motivation and Learning</i>	Curiosity: Nature, dimensionality, and determinants
Litman, J. A., Hutchins, T. L., & Russon, R. K.	2005	<i>Cognition and Emotion</i>	Epistemic curiosity, feeling-of-knowing, and exploratory behaviour
Loewenstein, G.	1994	<i>Psychological Bulletin</i>	The psychology of curiosity: A review and reinterpretation.
Mussel, P. (2013	2013	<i>Journal of Organizational Behavior</i>	Introducing the construct curiosity for predicting job performance
Oudeyer, P.-Y., Gottlieb, J., & Lopes, M	2016	<i>Progress in Brain Research</i>	Intrinsic motivation, curiosity and learning: Theory and applications in educational technologies
Reio, T. G., & Callahan, J. L.	2004	<i>Journal of Business and Psychology</i>	Affect, curiosity, and socialization-related learning: A path analysis of antecedents to job performance
Reio, T. G., & Wiswell, A.	2000	<i>Human Resource Development Quarterly</i>	Field investigation of the relationship among adult curiosity, workplace learning, and job performance
Singh, A., & Manjaly, J. A	2021	<i>Journal of Cognitive Psychology</i>	The effect of information gap and uncertainty on curiosity and its resolution
Voss, H. G., & Keller, H	1983	<i>Academic Press</i>	Curiosity and exploration: Theories and results
Wade, S., & Kidd, C	2019	<i>Psychonomic Bulletin and Review</i>	The role of prior knowledge and curiosity in learning

Appendix 2

Practice Data Pool

Author	Year	Journal or book or chapter	Relevance
Barnes, B.	2005	In T. R. Schatzki, K. K. Cetina, & E. von Savigny (Eds.), <i>The Practice Turn in Contemporary Theory</i> (pp. 16–28). Taylor & Francis Group	Practices and social orders
Bourdieu, P. (2013).	2013	Cambridge University Press.	<i>Outline of a theory of practice</i> (E. Gellner, J. Goody, S. Gudeman, M. Herzfeld, & J. Parry (eds.)).
Brown, J. S., & Duguid, P	2001	<i>Organization Science</i>	Knowledge and Organization: A Social-Practice Perspective
Carlile, P. R., Nicolini, D., Langley, A., & Tsoukas, H.	2014	Oxford University Press.	How matter matters: Objects, artifacts, and materiality in organization studies. In P. R. Carlile, D. Nicolini, A. Langley, & H. Tsoukas (Eds.), (pp. 1-15)
Cetina, K. K. (2001)	2001	In T. R. Schatzki, K. K. Cetina, & E. von Savigny (Eds.), <i>The practice turn in contemporary theory</i> (pp. 175–188). Routledge	Objectual practice
Feldman, M. S., & Orlikowski, W. J.	2011	<i>Organization Science</i>	Theorizing practice and practicing theory.
Feldman, M. S., & Worline, M.	2016	<i>Academy of Management Learning and Education</i>	The practicality of practice theory
Gherardi, S.	2001	<i>Human Relations</i>	From organizational learning to practice-based knowing
Giddens, A. (1984). (pp. 1–28).	1984	University of California Press.	Elements of the theory of structuration. In <i>The constitution of society: Outline of the theory of structuration</i>
Jarzabkowski, P.	2005	<i>Sage Publications</i>	<i>Strategy as practice: An activity-based approach.</i>
Jarzabkowski, P., Balogun, J., & Seidl, D.	2007	<i>Human Relations</i>	Strategizing: The challenges of a practice perspective.
Jarzabkowski, P., Kaplan, S., Seidl, D., & Whittington, R.	2016	<i>Strategic Organization</i>	On the risk of studying practices in isolation: Linking what, who, and how in strategy research
Jarzabkowski, P., & Spee, A. P.	2009	<i>International Journal of Management Reviews</i>	Strategy-as-practice: A review and future directions for the field.
Johnson, G., Langley, A., Melin, L., & Whittington, R..	2007	Cambridge University Press	<i>Strategy as practice: Research directions and resources.</i>
Jones, M. R.	2014	<i>MIS Quarterly</i>	A matter of life and death: Exploring conceptualizations of sociomateriality in the context of critical care
Latour, B.	2005	<i>Oxford University Press.</i>	<i>Reassembling the social: An introduction to actor network theory</i>
Leonardi, P. M., & Barley, S. R.	2010	<i>Academy of Management Annals</i>	What’s under construction here?: Social action, materiality, and power in constructivist studies of technology and organizing.
McIver, D., Lengnick-Hall, C. A., Lengnick-Hall, M. L., & Ramachandran, I	2013	<i>Academy of Management Review</i>	Understanding work and knowledge management from a knowledge in-practice perspective

Author	Year	Journal or book or chapter	Relevance
Nag, R., Corley, K. G., & Gioia, D. A.	2007	<i>Academy of Management Journal</i>	The intersection of organizational identity, knowledge, and practice: Attempting strategic change via knowledge grafting
Nicolini, D.	2012	<i>Oxford University Press</i>	Practice theory, work, & organization: An introduction (1st ed.)
Nicolini, D., & Monteiro, P.	2017	<i>Sage handbook of process organization studies</i>	The practice approach: For a praxeology of organizational and management studies. In A. Langley & H. Tsoukas (Eds.),
Nicolini, D., Gherardi, S., & Yanow, D. (2015).	2015	<i>Knowledge in organizations: A practice-based approach.</i> Routledge Taylor Francis Group.	Introduction: Toward a practiced based view of knowledge and learning. In D. Nicolini, S. Gherardi, & D. Yanow (Eds.),
Orlikowski, W. J.,	2007	<i>Organization Studies</i>	Sociomaterial practices: Exploring technology at work.
Orlikowski, W. J., & Scott, S. V.	2008	<i>The Academy of Management Annals</i>	10 Sociomateriality: Challenging the Separation of Technology, Work and Organization
Reckwitz, A.	2002	<i>European Journal of Social Theory</i>	Toward a Theory of Social Practices: A Development in Culturalist Theorizing.
Schatzki, T. R.	2002	The Pennsylvania State University Press	<i>The site of the social: A philosophical account of the constitution of social life and change.</i>
Schatzki, T. R.	2010	<i>Nature and Culture</i>	Materiality and Social Life.
Schatzki, T. R.	2019	Routledge	<i>Social change in a material world.</i>
Schatzki, T. R., Cetina, K. K., & von Savigny, E. (2001).	2001	Routledge	<i>The practice turn in contemporary theory</i>
Seidl, D., Ohlson, T., & Whittington, R.	2021	<i>Research in the Sociology of Organizations</i>	Restless practices as drivers of purposive institutional change.
Shove, E., Pantzar, M., & Watson, M.	2012	Sage Publications.	<i>The dynamics of social practice: Everyday life and how it changes.</i>
Vaara, E., & Whittington, R.	2012	<i>Academy of Management Annals</i>	Strategy-as-Practice
Whittington, R.	2002	<i>Academy of Management Proceedings</i>	Practice Perspectives on Strategy: Unifying and Developing a Field
Whittington, R.	2018	<i>Strategy Science</i>	Greatness Takes Practice: On Practice Theory's Relevance to "Great Strategy."
Whittington, R.	2019	In <i>Opening strategy: Professional strategists and practice change, 1960 to today</i> (pp. 23–57). Oxford University Press.	Making Strategy: Theory and practice.