



Organizational unlearning as a process: What we know, what we don't know, what we should know

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Received: 12 October 2023 / Accepted: 31 March 2024
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Abstract

Although the field of organizational unlearning has recently gained increased interest, its conceptual foundations and *raison d'être* are still debated. In this review, we aim to revisit various discourses and arguments to advance the understanding of organizational unlearning in management and organization studies. Using an integrative literature review approach with systematic elements, we examine the existing body of research on organizational unlearning. We review the literature from different perspectives, focusing on a process-based understanding in terms of why and how organizations intentionally discard knowledge. Based on our review, we develop an integrative framework that portrays organizational unlearning as a dynamically unfolding process over time. We propose implications and offer research directions that will allow future researchers to develop a more profound understanding of the concept.

Keywords Organizational unlearning · Unlearning · Unlearning process · Knowledge loss · Literature review · Integrative literature review

JEL Classification D83 · L20 · M10 · O30

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1 Introduction

Organizational unlearning implies that organizations intentionally and deliberately discard undesired, obsolete, or harmful knowledge—often to make room for the creation of new knowledge (Tsang and Zahra 2008). To this end, organizational unlearning can target different knowledge structures, such as systems, routines, basic assumptions, values, or norms. Moreover, it can occur in various contexts, such as innovation (Wang et al. 2013; Yang et al. 2014; Açıkgöz et al. 2021), mergers and acquisitions (Tsang 2008; Wang et al. 2017), organizational change (Grisold et al. 2020), and social care (Brook et al. 2016), among others.

Despite the considerable uptake of organizational unlearning in research, the concept has sparked controversy, primarily owing to its conceptual ambiguities (see Klein 1989; Martin de Holan 2011b; Howells and Scholderer 2016; Tsang 2017a, b; 1989; Klammer et al. 2019b). Along these lines, it has been argued that the term organizational unlearning conveys the impression that knowledge can be eliminated from organizations, essentially insinuating that targeted knowledge structures can be objectified and selectively erased (Turc and Baumard 2007; Howells and Scholderer 2016; Grisold et al. 2017). The main objection to these claims is that a large share of organizational knowledge is embedded in mental models, practices, and routines, which cannot be removed or taken out in any literal sense (e.g., Cowan et al. 2000; Tsoukas and Vladimirou 2001).

In response to these claims, emerging arguments emphasize that organizational unlearning should be understood as a *process* (e.g., Fiol and O'Connor 2017a, b; Grisold et al. 2017; Kluge and Gronau 2018; Peschl 2019; Burton et al. 2023). These arguments depart from the observation that organizational knowledge is deeply embedded in collective beliefs and routines. If some of these knowledge structures are to be unlearned, one has to focus on how they become less dominant *over time*. In other words, from a process-based perspective, organizational unlearning implies that organizational actors gradually reduce the influence of unwanted or harmful knowledge structures by blocking or preventing their enactment (Grisold et al. 2017; Kluge and Gronau 2018). As this process progresses, old knowledge becomes less likely to be used (and new knowledge, if any, becomes more likely to be used).

Such process-based views of unlearning evoke considerable interest in the field. They not only resonate with perspectives from other fields, such as psychology and cognitive sciences (e.g., Kluge and Gronau 2018; Peschl 2019; Haase et al. 2020), but also inform practical interventions to enable or support unlearning initiatives (Klammer et al. 2019a; Grisold et al. 2020). However, we lack a systematic understanding of what we know about the process behind organizational unlearning. Some open questions include the following: what does this process imply? How does it evolve? Why and when does it succeed or fail?

Existing reviews of organizational unlearning (e.g., Tsang and Zahra 2008; Klammer and Gueldenberg 2019; Sharma and Lenka 2022a, b) highlight various important aspects, but do not establish a process-based understanding of organizational unlearning. Hence, in this review, we pursue the following questions:

what do we know about the process of organizational unlearning, and how can we synthesize existing perspectives? To answer these questions, we develop a multi-perspective and integrative view to explain how organizational unlearning evolves over time.

2 Review approach

We followed an integrative review approach, including systematic elements, to search for relevant literature. Due to the field's fragmented understanding, we deem it necessary and suitable to bring different perspectives together to surface the nature of the concept, develop implications, and provide avenues for future research. This procedure is motivated by the observation that organizational unlearning is discussed within the broader realm of management and organization studies (MOS), but its conceptual assumptions and conversation topics remain within rather insulated communities in specific sub-fields, thereby fostering and reproducing different perspectives on the same concept.

We (the authors) ascribe ourselves as researchers in the broader field of MOS, although each of us has researched organizational unlearning from a different perspective, based on different scholarly communities. This enabled us to adopt different perspectives to examine the same phenomenon. We initially engaged in several rounds of discussion and sensemaking to establish our position and define the scope of our review (Cronin and George 2023). In the time between these discussions, each author conducted initial, non-systematic searches (Rojon et al. 2021) to bring in different perspectives. We then established our final position that organizational unlearning is a processual phenomenon warranting attention to the antecedents, outcomes, and dynamics of intentionally discarding undesired or outdated knowledge from organizations.

After establishing our position, we applied various systematic steps to build the foundation for our review (Tranfield et al. 2003). We searched for literature on organizational unlearning written in English from 1981 (Hedberg's book chapter as the starting point) to February 2024. Using the keywords [organization* AND unlearn*], we conducted a title and abstract search in Web of Science, EBSCOhost (Business Source Premier), ProQuest (ABI/INFORM), and Elsevier (ScienceDirect) databases (n = 1104). Next, we merged all results from the databases into a list and, subsequently, deleted duplicate results (n = 759). In an initial review, we read all titles and abstracts and applied two specific criteria to exclude false positives. First, we removed literature from research fields that have no connection to the broader domain of MOS (e.g., clinical psychology). Second, we excluded studies that only serendipitously mentioned the term unlearning in the title or abstract (n = 246). Next, we screened and assessed the remaining full texts. At this stage, we identified literature that fell outside our scope. In doing so, we eliminated non-substantive works that use the term "unlearning" in the title or abstract, while not thoroughly addressing or discussing the phenomenon in the remainder of the paper (n = 88).

As an important additional step, we added an integrative dimension to maximize the comprehensiveness of our review. We conducted hand-searching,

snow-balling, and citation-tracking to identify relevant literature that did not fit our search criteria and might have been missed (cf. Trullen et al. 2020). Additionally, we integrated literature from our respective communities to acquire different perspectives (cf. Cronin and George 2023). This approach allowed us to incorporate relevant literature beyond our initial, systematic search strings. In doing so, we illustrated that some works examine, at their core, intentional loss of knowledge in the context of MOS, without actually using the term unlearning (e.g., Polites and Karahanna 2012; Pentland et al. 2020), but are deemed useful to further the understanding of the phenomenon ($n = 124$) (Fig. 1).

We analyzed and synthesized the final sample using an Excel data extraction template to elicit both quantitative (e.g., authors, publication information) and qualitative (e.g., methodology, findings) information. In terms of the content, we identified relevant perspectives that previous researchers have used to empirically investigate and theorize about organizational unlearning, and which are relevant to examining organizational unlearning as a process.

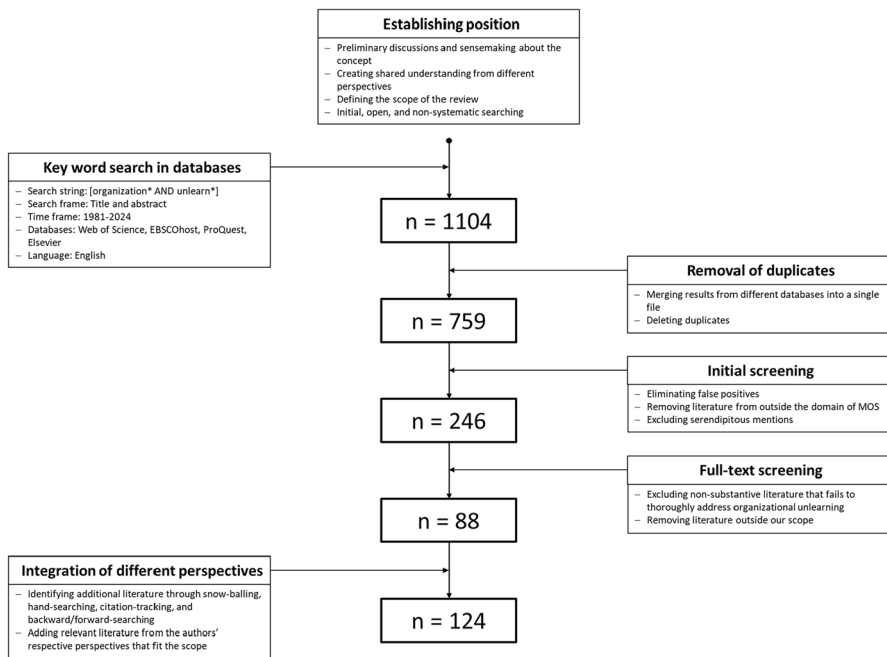


Fig. 1 Overview of the search process

3 Findings

3.1 Organizational unlearning as a process: Definitions and viewpoints

The concept's *raison d'être* has been discussed from various perspectives. Starbuck (in: Nguyen 2017) explains the origins of unlearning as an organizational phenomenon in MOS. Hedberg and Starbuck observe that organizations find it difficult to adapt to crises and changing environments; they face failure, reluctance, or hesitancy to unlearn (e.g., Hedberg et al. 1976; Starbuck et al. 1978; Nystrom and Starbuck 1984; Starbuck 1996). While some assert that unlearning is subsumable under organizational learning (Huber 1991), or argue for its inclusion in the wider context of learning dynamics (Visser 2017), others recognize the merits of treating organizational unlearning as a distinct, isolated, and stand-alone phenomenon (Tsang 2017a, b; Becker 2019).

While terms, such as knowledge, dominant logics, or routines are loosely used to describe what organizational unlearning entails, existing studies fall short of clearly defining the kinds of knowledge structures being investigated, respectively unlearned. We found that cognitive and behavioral knowledge structures are two of the most widely used perspectives for pinpointing the locus of the unlearning process (Akgün et al. 2007b; Tsang and Zahra 2008). While the cognitive perspective describes how unlearning helps discard knowledge that has been collectively interpreted, the behavioral perspective refers to how routines, habits, or procedures are collectively abandoned (Easterby-Smith and Lyles 2011). The collective lens of shared beliefs and assumptions is thought to be a vital part of the unlearning process (Turc and Baumard 2007). Sinkula (2002) suggests that organizational unlearning starts with changing cognitive structures, mental models, dominant logics, and other core assumptions that guide behavior. In turn, organizations can destabilize and eliminate behaviors, such as routines, habits, or procedures (Martin de Holan and Phillips 2004b; Fiol and O'Connor 2017a, b).

Visser (2017) highlights the interplay of complex social processes as organizational unlearning necessitates individuals to let go of part of their identities as enacted practices are strongly connected to social identities (McKeown 2012). In addition, unlearning has also been explored from emotional (Pratt and Barnett 1997; Rushmer and Davies 2004) and normative perspectives (Yildiz and Fey 2010). Hence, organizational unlearning is a multi-faceted term yielding multiple associations regarding the dynamics of knowledge loss.

3.2 Organizational unlearning mechanisms and conceptualizations

Several studies aim to shed light on different mechanisms of unlearning explaining *how* organizations discard existing knowledge. Bowker (1997), for example, distinguishes between clearance and erasure of organizational knowledge. Similarly, unlearning has been described as the process by which organizational members gradually refrain from enacting existing routines over time by removing cues

(Kluge and Gronau 2018). Organizations might unlearn through tailored interventions, such as inactivating specific knowledge structures or rivaling enforced enactment (Turc and Baumard 2007).

Several quantitative empirical studies investigate the mechanisms of organizational unlearning. For example, the “unlearning context,” introduced by Cegarra-Navarro and Sánchez-Polo (2008) includes sequential unlearning steps from the individual to the organizational level. This model has been widely used in other studies (e.g., Cegarra-Navarro et al. 2010, 2011a, b, 2013, 2014, 2016, 2021; Cepeda-Carrion et al. 2012a, b; Cegarra-Navarro and Cepeda-Carrion 2013; Ortega-Gutiérrez et al. 2015, 2022; Wensley and Cegarra-Navarro 2015; Cegarra-Navarro and Wensley 2019; Lyu et al. 2022). Akgün et al. (2006, 2007a, b) operationalize unlearning as changes in beliefs and routines, a conceptualization that has been used in several other studies (e.g., Wang et al. 2013, 2017; Yang et al. 2014; Xi et al. 2020; Zhao and Wang 2020).

Qualitative empirical studies paint a more fine-grained picture of unlearning mechanisms in organizations. Mechanisms to facilitate organizational unlearning might vary, depending on the timing of their occurrence or the desired outcomes of the process (e.g., Grisold et al. 2020; Xu et al. 2023). Rezazade Mehrizi and Lashkarbolouki (2016) outline the cognitive and behavioral dynamics of organizational unlearning when discarding troubled business models including the stages of realizing, revitalizing, parallelizing, and marginalizing. Similarly, Tsang (2008) finds organizational unlearning mechanisms at different stages of knowledge transfer to acquisition joint ventures. Stage-driven process models are often found in practitioner articles that typically provide advice on how managers can help their organizations unlearn as they follow a sequence of steps (Reese 2017; Klammer et al. 2019a; Govindarajan et al. 2020, 2021).

Another way to unpack organizational unlearning mechanisms is to sketch its recursive nature. The key assumption here is that unlearning is a fragile and highly dynamic process wherein discarding and learning activities unfold interchangeably (Nygren et al. 2017), or sometimes occur simultaneously (Fiol and O’Connor 2017a, b). Organizational unlearning cycles (Pratt and Barnett 1997; Cegarra-Navarro and Wensley 2019; Hamza-Orlinska et al. 2024) or spirals (Macdonald 2002; Grisold and Kaiser 2017) provide additional insights into the recursive nature of the process. Peschl (2019) argues that the exact process of unlearning cannot be defined; embracing an unknown future means to embark on an uncertain and emergent process.

Further, we identified studies that relate organizational unlearning to learning and relearning, often contextualized in sequential learning-unlearning-relearning steps (e.g., Azmi 2008; Rupcic 2019; Sharma and Lenka 2019; Zhao and Wang 2020). This idea stresses that unlearning occurs in relation to existing knowledge (prior learning) and relearning (new learning of knowledge). From this viewpoint, new learning cannot be acquired before established knowledge has been removed. Existing views on mechanisms and conceptualizations share the commonality that organizational unlearning is a process characterized by context-specific dynamics in terms of discarding and/or acquiring knowledge.

3.3 Levels of unlearning

We found different views regarding the levels as well as their interdependence and interplay during unlearning processes. Generally, unlearning is portrayed as an *organizational* phenomenon that helps describe learning, adaptation, and change, or how firms deal with crises (Nguyen 2017; Vu and Nguyen 2022). Researching organizational unlearning, however, also requires an understanding of individuals and groups, as organizations do not have cognitive capabilities per se (Hedberg 1981; Brooks et al. 2022).

For example, awareness and relinquishing capabilities are strongly connected to intentional knowledge loss of individuals (Becker 2008, 2010). Individual unlearning can also be described as a transformative journey of discernment including receptivity, recognition, and grieving (Macdonald 2002). Further, individual unlearning in organizational contexts has been typologized into routine unlearning, wiping, and deep unlearning depending on the depth of the discarding process (Rushmer and Davies 2004; Hislop et al. 2014).

A conceptual attempt to explain the interplay between different levels suggests that individual unlearning first promotes group and, subsequently, organizational unlearning, or vice versa (Zhao et al. 2013). We identified two viewpoints on how unlearning transfers across levels: top-down and bottom-up. The idea of unlearning as a top-down activity refers to instances wherein organizational decision-makers introduce changes that require individuals to discard existing assumptions, mental models, behaviors, or routines (e.g., Nystrom and Starbuck 1984; Martin de Holan et al. 2004; Martin de Holan and Phillips 2004a; Nguyen 2017; Grisold et al. 2020; Klammer 2021). On the other hand, unlearning as a bottom-up activity describes the effects of individuals' decisions to discard existing knowledge structures of an organization (e.g., Becker 2008, 2010; Hislop et al. 2014; Matsuo 2019a). Additionally, we found studies that specifically deal with the individual level (Tanaka 2023; Yin 2023) or group levels (e.g., Akgün et al. 2006, 2007a; Klammer and Gueldenberg 2020; Açıkgöz et al. 2021). The process of organizational unlearning can differ significantly, depending on whether and how unlearning unfolds within or between different organizational levels and entities over time.

3.4 Timing of organizational unlearning

Existing research highlights how the process of unlearning depends on timing-related decisions. To ensure strategic resilience in a world of turbulence and uncertainty, organizations should take action before it is desperately needed, thus unlearning should be a proactive process (Morais-Storz and Nguyen 2017). Managers should be able to identify early warning signs of an inflection point, that is, a shift in the external environment causing change that alters the basic assumptions upon which a business is built (McGrath 2019; Sharma and Lenka 2024). An early warning system may help identify and unlearn basic assumptions that are no longer applicable (McGrath and Euchner 2020).

Numerous studies indicate, however, that this approach can be challenging. First, it is difficult to anticipate the exact timing of environmental change (Martignoni and Keil 2021) to initiate the process of organizational unlearning. Second, organizations might find it difficult to find and adopt new operating methods because they have become firmly dependent on past methods (Starbuck 2017; Snihur 2018) and might be stuck in competence traps due to inertia arising from prior success (Leonard-Barton 1992). Third, it is not easy to tell whether companies render an old belief obsolete (Nguyen 2017), because it can often only be known retrospectively if an organization's belief has become obsolete and, therefore, should have been discarded (Martignoni and Keil 2021). Fourth, unlearning requires a collective decision-making process, challenged by specialized personnel, who see their careers as tied to existing strategies and their core beliefs (Starbuck 2017).

We found two conflicting paradigms regarding the timing of organizational unlearning: (i) the reactive paradigm, which suggests that unlearning can only take place after noticeable failures or major interruptions, and (ii) the proactive paradigm, which implies that unlearning should occur prior to inflection points. We observed that many empirical studies empirically investigate organizational unlearning from the perspective of the reactive paradigm. For example, organizations tend to introduce technical and organizational change only after the occurrence of catastrophic failures, as in the case of NASA during the Challenger disaster (Starbuck and Milliken 1988). Conversely, only very few studies investigate proactive unlearning approaches at the organizational level. For example, Burt and Nair (2020) investigate how an organization proactively discards deeply held assumptions about its business logic, and thus initiates strategic change. Hence, the point of initiating the purposeful discarding of knowledge seems vital to navigating unlearning processes in organizations.

3.5 Critical views of organizational unlearning

We also found that critical approaches shed light on the process of organizational unlearning. These approaches are considered “critical” because they fit in with what Fournier and Grey (2000; cf. Alakavuklar and Alamgir 2018) called “non-performative intent,” an important theme in critical management studies. In general, they highlight the importance of unlearning, but reject “the instrumental and performative use of unlearning in the sole service of attaining organizational goals” in the neoliberal system (Visser 2017, p. 49). In this regard, these views differ from many other MOS approaches to organizational unlearning.

Although Contu et al. (2003, p. 934) do not directly address the concept itself, they offer a useful starting point for the critical understanding of organizational unlearning in MOS and identify two central issues as learning can become “antithetical:” to learn is to disorganize and increase variety, but to organize is to reduce variety. That is, learning can be used as a tool to enhance organizational performance, but it can also have a wider impact beyond managerial concerns and may violate the common social good. These views have important implications for a critical understanding of the organizational unlearning process.

Brook et al. (2016, p. 371) contend that there is a cultural tendency to see learning as an unquestionably “good thing,” which altogether is exacerbating rather than resolving the problems confronting business and societies (cf. Contu et al. 2003; Hsu 2013). In Brook et al.’s (2016) account, organizational unlearning is a necessity because it not only problematizes the self-evident, positive views of learning, but also reveals the political nature of learning; they applied the concept of organizational unlearning in the field of (critical) action learning and argue that unlearning is particularly relevant to address “wicked problems,” like global warming.

Drawing upon Foucault’s (1991) governmentality, Chokr (2009, p. 61) perceives unlearning as a reflective, enduring capability for individuals “not to be governed” by “the illusory world of all the ideas, notions and, beliefs that hem, jostle, whirl, confuse and oppress them.” Ultimately, for Chokr (2009, p. 49), unlearning should generate “well-trained minds and individuals capable of questioning, critical thinking, imagination, creativity and self-reflective deliberation as engaged citizens.” Pedler and Hsu (2014) apply this approach to MOS and suggest that power is an inseparable, unmanageable, and uncontrollable dimension of learning, and that unlearning implies an individual’s capability to recognize the inevitable power relations in the process of learning, and making ethical judgments over time. Hsu (2021) articulates three capabilities implied by an on-going attempt of unlearning in the field of management education: the capability to think differently, to approach knowledge autonomously, and to act as self-governed, self-reflective, self-engaged citizens.

Antonacopoulou (2009, p. 424) views unlearning as an on-going practice of “asking different questions by extending the outcomes sought” which is “in sharp contrast to previous conceptualizations” to remove “old knowledge in favour of new knowledge.” Unlearning ought to trigger “difference” (Deleuze 1994). Hsu (2013) contends that unlearning, as a practice, bears liberating and emancipatory implications as it enables individuals to develop a capability to problematize institutionalized ideologies and actions; epistemologically, unlearning assists the rediscovery of what Foucault (1980) called “subjugated knowledge.” Such subjugated knowledge may include that wisdom has been marginalized within predominant theories and practices, for example, the wisdom of non-action (Hsu 2013). Drawing upon a feminist, de-colonial, and arts-based perspective, Krauss (2019) views unlearning as a collective practice that assists individuals in creating alternative forms of living while breaking with the promise of economic advancement and growth. Taken together, these views suggest that the process of organizational unlearning requires several skills and practices associated with the capability or possibility of individuals and collectives to question and discard knowledge.

3.6 Summary of key findings

The following table provides an overview of the key points of each perspective in the process of organizational unlearning (Table 1). Our findings form the foundation of the implications, the integrative framework as well as future research directions.

Table 1 Summary of key findings for understanding organizational unlearning as a process

Theme	Theoretical findings	Methodological findings	Practical findings
Definitions and viewpoints	Two major viewpoints: (i) Process of unlearning as subsumable under or intertwined with learning and (ii) unlearning as a distinct phenomenon	Open to various research methods Often lacking a clear definition of type of knowledge investigated, although cognitive (e.g., beliefs) and behavioral (e.g., routines) lenses are preferred	Unlearning aids in adapting to a changing environment over time Many organizations find it very difficult to unlearn established knowledge
Mechanisms and conceptualizations	Mechanisms behind, and conceptualizations of, the unlearning process differ significantly	Quantitative scholars use “unlearning context” or “unlearning as changes in beliefs and routines” as operationalization of the unlearning process Qualitative scholars use a wider array of conceptualizations and operationalizations	Attempts to provide explanations and prescriptive implications in terms of how organizations (can) unlearn
Levels	Generally perceived as an organizational process Different levels (organizational, group, individual) acknowledged Sequential or intertwined interplay of levels over time	Distinction of investigated level is seldom clear-cut	Unlearning can happen across all levels Top-down vs. bottom-up approaches
Timing	Two conflicting paradigms: (i) Reactive (unlearning occurs after failure or major interruption) and (ii) proactive (unlearning happens prior to inflection points)	Scholars mostly research the process of reactive unlearning in retrospect	Managers can unlearn prior to organizational failure Calls for a more proactive unlearning mindset and approach
Critical views	Power is an inseparable and unmanageable dimension in/of the unlearning process Significance of identifying potential beneficiaries and victims Seeks to offer an alternative account of the unlearning process	Does not favor a particular research method Scholars apply a critical view of unlearning to analyze organizational phenomena	Helps managers recognize that unlearning should have a social value Facilitates the understanding of the conflicting nature between learning and unlearning over time Potential of unlearning to address “wicked problems”

4 Implications

The current body of literature shares three common underlying assumptions about the concept:

- (1) Organizational unlearning is perceived as a process that is based on an organization's intention to discard—often multiple and intertwined—existing organizational knowledge structures;
- (2) Organizational unlearning evolves through mechanisms that assume different shapes and forms, depend significantly on the context, and are mostly introduced reactively to ensure organizational survival during crises, facilitate organizational change and learning, and improve innovativeness; and
- (3) Organizational unlearning is regarded as a highly complex organizational phenomenon as it dynamically unfolds within and across multiple levels, such as groups or individuals.

Our review, however, also reveals that the concept of organizational unlearning is imbalanced and fragmented (cf. Martin de Holan and Phillips 2011; Klammer and Gueldenberg 2019) which has led to its contestation (cf. Klein 1989; Howells and Scholderer 2016; Tsang 2017a, b), because our understanding of how unlearning unfolds in organizational settings over time is still vague.

Three issues stand out. First, studies use different underlying assumptions about the concept, each typically arising from and remaining within its own domain. Using different terminologies (e.g., intentional forgetting, unlearning) or using the same terminology to describe different underlying assumptions about unlearning (e.g., unlearning following a sequential, recursive, or dialectic logic) leads to discrepancies and hampers our understanding of the concept. This also pertains to the process of unlearning; for instance, do organizations try to overwrite established knowledge by enacting new knowledge, or is knowledge aimed to be erased? Second, existing literature tends to focus on specific aspects of organizational unlearning (e.g., levels, antecedents, outcomes) without setting studies in a wider context, thereby leading to fragmentation. This perpetuates existing conceptual issues regarding the process of unlearning. Third, and in contrast to the previous point, other studies disregard the clarification of underlying assumptions about organizational unlearning (e.g., problematization or clearly defining levels), fostering a lack of decipherability.

We find that literature lacks an encompassing perspective that synthesizes existing conceptualizations and empirical studies to clarify *why* unlearning occurs, *what* it entails, and *how* the process actually unfolds. We propose and visualize an integrative framework that considers the issues outlined above and incorporates various fragments and streams in the field of organizational unlearning. To build a framework that is applicable across all communities within MOS, we assert that viewing unlearning as a process and making the concept dynamic are key to bringing different perspectives together. In the following, we articulate and discuss four implications that help future studies navigate through the profound and dynamic nature of organizational unlearning.

4.1 Implication 1: Organizational unlearning involves multiple levels

Unlearning entails a profound interdependence and interplay between and within different levels of an organization. However, existing research reflects a distinction between levels, with studies typically focusing on the individual level (Hislop et al. 2014; Matsuo 2018, 2019a, b), the group level (Akgün et al. 2006; Lee and Sukoco 2011; Klammer and Gueldenberg 2020), or the organizational level (Yang et al. 2014; Snihur 2018). Whether initiated top-down or bottom-up (Klammer et al. 2019a; Padan and Nguyen 2020; Grisold et al. 2020), unlearning cannot be perceived as an isolated phenomenon. It dynamically and sometimes even simultaneously affects all entities including individuals, groups as well as the entire organization. Literature highlights the vital role of individuals and groups in the process of unlearning (Zhao et al. 2013; Hislop et al. 2014; Kluge 2023); since these claims are conceptual, however, we know little about the dynamics that unfold across these levels.

We suggest that the unlearning process manifests at all organizational levels. It is crucial to stress that in order to understand unlearning at the collective level, one cannot aggregate and extrapolate individual-level cognitive processes (Grisold and Kaiser 2017). Rather, collective unlearning involves complex feedback mechanisms that either reinforce or diminish the influence of old knowledge on organizational practices, which, in turn, spills over to collective activities (e.g., Crossan et al. 1999).

4.2 Implication 2: Motives behind organizational unlearning need to be translated into interventions

Organizational unlearning is enabled by intentional interventions that specifically aim to support the process of discarding obsolete knowledge structures over time. Several empirical studies offer initial insights into the workings and dynamics of interventions as mechanisms of organizational unlearning.

Perhaps the most challenging and complex intervention is to reduce the influence of old knowledge over time. While explicit, codified knowledge, such as written rules and regulations can be discarded relatively easily, implicit knowledge structures, like assumptions, beliefs, values, or norms are unequally harder to be unlearned. For this intervention, it is important to eliminate retrieval cues that make individuals draw less from old knowledge or habits over time (Kluge and Gronau 2018). This also holds true when no new knowledge should be implemented; reducing the influence of old knowledge is key in discarding an organization's obsolete cognitive and behavioral knowledge structures to free up space for future possibilities (Peschl 2019). Combining both approaches, appreciative inquiry, for example, can facilitate the discarding of old knowledge while simultaneously addressing the creation of new knowledge (Srithika and Bhattacharyya 2009). Additionally, the benefits of the “new” should be constantly reinforced through feedback and clear communication (Grisold et al. 2020).

4.3 Implication 3: Processes of organizational unlearning differ in form, antecedents, and outcomes

We suggest that antecedents can be based on reactive and proactive grounds, and that the (desired) outcomes of organizational unlearning can only be fully known once the process has been completed. Generally, scholars promote the understanding that organizational unlearning is a reactive phenomenon (Snihur 2018) typically triggered by problems (Hedberg 1981; Nystrom and Starbuck 1984) or different cues (Sinkula 2002). More recent studies show that organizational unlearning also entails a proactive dimension and is advantageous when executed proactively (Morais-Storz and Nguyen 2017). In terms of outcomes and consequences, unlearning is generally perceived as a positive phenomenon. It is regarded as a facilitator of organizational change (e.g., Johannessen and Hauan 1994; Turc and Baumard 2007; Martin de Holan 2011a; Mull et al. 2023; van Oers et al. 2023; Hamza-Orlinska et al. 2024) and an enabler of innovation and innovative behavior (e.g., Becker 2008; Cepeda-Carrion et al. 2012a; Leal-Rodríguez et al. 2015; Zhang et al. 2022; Zhao et al. 2022; Klammer et al. 2023).

Researchers have seldom questioned the positive value of organizational unlearning. However, as knowledge is intertwined throughout the organization and embedded in assumptions, world views, values, habits, routines, processes, etc., unlearning specific knowledge structures might lead to a decrease of value or functioning of other parts (Zahra et al. 2011). Therefore, it is difficult to judge the value of (to-be) discarded knowledge. Organizational unlearning prompts a clash between the past, present, and future and involves different elements, such as culture, assumptions, beliefs, structures, strategies, routines, or habits. Hence, and contrary to managerial expectations (Govindarajan et al. 2021), the outcome of organizational unlearning can only be fully understood once the process is complete.

4.4 Implication 4: Prevalent organizational contexts highly influence the unlearning process

Researchers need to acknowledge that organizational unlearning comes with different reasons, decisions, and strategies. Studying idiosyncratic features of a given organizational context contrasts with the prevalent focus in organizational unlearning research. Some studies provide in-depth insights about how unlearning unfolds in a specific organizational context (Martin de Holan and Phillips 2004b; Rezazade Mehrizi and Lashkarbolouki 2016; Burt and Nair 2020). The contexts or situated features in which unlearning occurs, however, remain elusive as the main interest is often placed on abstract sequences or phases that characterize unlearning (e.g., Nygren et al. 2017; Cegarra-Navarro et al. 2021; Kim and Park 2022). This comes at the cost of understanding how organizational unlearning actually unfolds and what elements it entails.

Empirical studies that embrace the processes through which organizational phenomena unfold typically find that these processes are tied to the specific situated

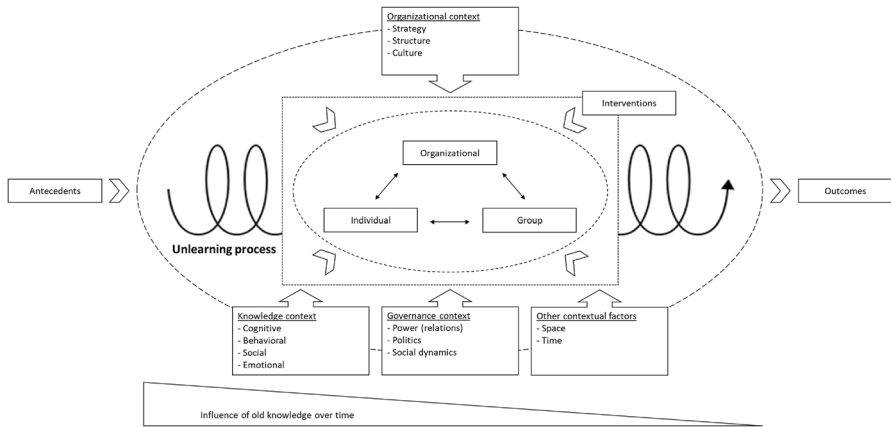


Fig. 2 Process-based framework of organizational unlearning

context of organizations (Langley et al. 2013). Based on this line of thinking, we argue that the elaboration of an empirically examined unlearning process should be tied to its organizational context and other prevailing situated features.

We summarize and visualize our implications in an integrative framework (Fig. 2) to highlight the characteristics of the organizational unlearning process. Unlearning in organizations depends on a variety of factors that can alter the course of the process. In the following, we propose future research avenues that can further our understanding of organizational unlearning.

5 Future research directions

5.1 Forging organizational unlearning research as process-based studies

Discarded knowledge that has once been enacted in organizations is difficult to capture. Researchers have attempted to capture this process using cross-sectional surveys (e.g., Sheaffer and Mano-Negrin 2003). We believe that—although efforts to operationalize unlearning are immensely valuable—existing questionnaires fall short of capturing the full extent of the organizational unlearning process; not capturing the full extent of unlearning does not allow for explaining non-linear dynamics that underlie the process (e.g., actors may find it more difficult to unlearn initially, but it becomes significantly easier after knowledge has been used less often). We assert that researchers need to study the concept more profoundly and longitudinally by examining different antecedents, processes, interventions, outcomes, levels, knowledge structures, and so on, from a process-based perspective (Langley and Tsoukas 2017). This can be achieved through methods, such as ethnography or case study research, that capture discarded knowledge and allow for a deep observation of the organizational unlearning process.

New research methods for generating insightful data may contribute to a clearer understanding of the phenomenon. One of the issues in survey-based research, for example, is knowledge retrieval; asking subjects if they currently need to unlearn, or have unlearned knowledge recently, might trigger an association with old knowledge. Hence, the process of unlearning could be disturbed. Methods that track the development and paths of knowledge to make it more explicit are especially interesting (Kluge et al. 2019).

Turning to research methods in digital environments, for example, may allow researchers to generate fresh insights into organizational unlearning. The increasing availability of digital trace data, i.e., digital footprints that are automatically recorded whenever actors use information technology, such as ERP systems (Pentland et al. 2020) or online platforms (Lindberg et al. 2016), renders promising opportunities. Digital trace data are considered particularly useful by organizational researchers because they provide an unobtrusive and unbiased way of studying organizational work (e.g., Berente et al. 2019). Using digital trace data to study unlearning processes allows researchers to gain an accurate picture of the more and less frequently adopted actions, and how processes change over time (e.g., before and after an unlearning-related intervention). Therefore, using digital trace data could open entirely new avenues for investigating organizational unlearning. Researchers could conduct in-depth analyses to examine whether, and/or how, interventions yield desired outcomes, undesired routines vanish, or single actions disappear over time.

Process-based studies can also shed a more nuanced light on mechanisms, antecedents, or outcomes (Langley et al. 2013). Our findings on the timing of unlearning imply that organizations, although seldom investigated empirically, do not always wait until they have no other choice but to unlearn. This challenges the assumption that organizational unlearning is caused exclusively by endogenous or exogenous shocks and, in turn, raises questions about the antecedents and expected outcomes of the process. Diagnosing antecedents and outcomes seems to be a major challenge, often because we can only observe organizational unlearning retrospectively.

If organizations understand how knowledge abandonment can help them achieve specific goals, they can design a setup for the type of unlearning that matches their objectives. For example, for organizations that want to improve gradually and continuously, shallow unlearning would be a good option because it contributes to day-to-day adaptation without destroying operational stability. Organizations that want to challenge their deeply held beliefs or taken-for-granted assumptions might require a proactive and deep unlearning approach. Following this line of thinking, we suggest for future studies to focus on the dynamic nature of the concept to highlight the specific facets and interventions of organizational unlearning processes, and provide in-depth explanations of how organizations intentionally refrain from using old knowledge over time. Focusing on such dynamics might also provide fresh perspectives on the interdependence and interplay at different organizational levels. These insights are needed, from our point of view, to strengthen the conceptual understanding of the organizational unlearning phenomenon, and demarcate it from related concepts, such as organizational learning and change (Howells and Scholderer 2016).

5.2 Highlighting contextual features and the nature of the unlearning process

Putting increased focus on the context of an organization may shed light on how or why organizations detach from—or keep adhering to—old routines, assumptions, and beliefs. Foregrounding the idiosyncratic features of old knowledge and how they are tied to the context of an organization might inform the design of effective interventions in a given situation. As such, unlearning interventions have both explanatory and normative value for organizational unlearning research. From an explanatory perspective, focusing on the context of unlearning interventions enables researchers to outline why an unlearning process unfolds the way it does. Differences in the width and depth of unlearning interventions, paired with the desired outcomes of the process, may explain how organizations intentionally remove knowledge from points A to B in a specific context. From a normative perspective, the awareness of contextual features can guide organizations, policy-makers, and other stakeholders in initiating and guiding different unlearning processes.

This also corresponds with emerging claims that MOS researchers should increasingly engage in real-world problem solving (e.g., Hideg et al. 2020; Howard-Grenville 2021). For example, scholars in the field of MOS have increasingly focused on grand challenges, questioning how organizations can effectively address complex social and environmental threats (e.g., Ambos and Tatarinov 2022; Voegtlin et al. 2022; Sele et al. 2024). One underlying theme in this stream of research is that organizations need to replace their established logics and routines, which are often profit-oriented, with new and more conducive ones. The transition from old to new ways of doing things, however, rarely works smoothly. Several studies have found that organizations tend to fall back on old detrimental knowledge as they tackle grand challenges (e.g., Wright and Nyberg 2017; van Wijk et al. 2020). Focusing on contextual features and the in-situ nature of unlearning processes helps researchers understand the latent, sub-conscious facets of why knowledge abandonment might or might not unfold in a given situation.

5.3 Spotlighting power, power relations, and politics in unlearning processes

Critical perspectives of unlearning, informed by critical management studies, problematize the predominant managerial understanding of organizational unlearning, because they recognize that the process is highly power-laden. Such views differ from the vast majority of existing unlearning literature. While critical perspectives do not forsake the idea of unlearning and learning, they suggest that these processes may have far-reaching effects, for which organizations and managers purport to take responsibility. However, to date, critical views of unlearning have had little impact on mainstream MOS literature, but may enrich the aforementioned research possibilities.

First, future studies could focus on the power relations embedded in the process of organizational unlearning. For instance, managerial intervention in the unlearning process inevitably reflects different interests and may generate resistance because

unlearning, like learning, is also a socially constructed entity with relations of power (Pedler and Hsu 2014). It is important to understand the different stakeholders and organizational politics involved in this process, including the beneficiaries and victims of organizational unlearning. Second, the critical views of unlearning may legitimize what Pedler and Hsu (2019) called an “alternative paradigm” of learning organizations. Future studies could explore how the unlearning process stimulates incompatible organizational purpose that collides with the prevailing one. Researchers may also explore different forms of wisdom and their relationship with organizational unlearning, and how unlearning helps inspire alternative organizational realities.

6 Practical implications

Organizational unlearning, particularly seen as a process that evolves over time, has significant practical implications for how organizations progress, innovate, and adapt to changing environments. By actively unlearning outdated or inefficient practices, organizations can adopt innovative methods and technologies more effectively (Di Maria et al. 2023). This process is crucial in rapidly changing industries where clinging to old ways can be a significant disadvantage. Unlearning, when understood as an on-going and persistent effort, helps to create a culture of agility and flexibility. Organizations become more adept at responding to market changes, customer needs, and emerging trends.

Furthermore, leaders and managers play a crucial role in initiating, modelling, and facilitating unlearning. This process calls for adaptable and self-aware leaders capable of challenging the status quo. It also requires them to be effective communicators in guiding their teams through unlearning processes. Organizational unlearning encourages a culture of critical thinking and open-mindedness, which is essential for strategic planning and problem-solving. To summarize, understanding organizational unlearning as an on-going effort requires deliberate strategies and a supportive organizational culture as it involves systematic approaches to identify what needs to be unlearned, mechanisms to facilitate the unlearning process, and the integration of new learning and knowledge into an organization’s operations.

7 Conclusion

Our review of the existing literature in the broader context of MOS and its respective domains reveals a fragmented field of organizational unlearning, including studies based on different underlying assumptions about the concept. To bring different viewpoints together and highlight concerns about the phenomenon, we propose implications and possible future research directions that will help researchers navigate through the jungle of different understandings of unlearning. Table 2 presents exemplary research questions that can serve as starting points for future research. Organizational unlearning is best understood and researched as an intentionally

Table 2 Exemplary research questions for process-based unlearning research

Area	Exemplary research question (process-focus)
Strategy	What is the role of organizational unlearning in strategy formulation and execution?
	How does organizational unlearning unfold in top managers' strategic decision-making?
	What are mechanisms through which organizational unlearning influences organizational ambidexterity?
	How does the process of organizational unlearning impact strategic renewal?
	How do firms organize for unlearning without impeding organizational stability?
Innovation	How does the process of organizational unlearning influence the diffusion and adoption of innovation within and across organizations?
	What organizational structures, processes, or practices facilitate organizational unlearning for sustained innovation?
	How does innovation trigger organizational unlearning processes, and vice versa?
	What is the role of employee creativity in continuous team unlearning?
	What innovation activities hamper the process of organizational unlearning?
Human resources	How does the process of organizational unlearning impact employee learning and development initiatives?
	What is the role of organizational unlearning for employee resistance to change?
	How does organizational unlearning influence talent management practices, such as recruitment, retention, or succession planning?
	How do firms foster individual unlearning to empower employees to adapt to dynamic business environments?
	What skills do (middle/top) managers need to facilitate and lead organizational unlearning processes?
Information systems	How can organizational unlearning be supported through IT-specific interventions?
	What is the role of unlearning in digital innovation and transformation processes wherein organizations typically question and discard deeply established knowledge structures?
	How can unlearning be supported through design interventions, such as digital nudging?
	How does unlearning differ in AI-based systems?
	How can we measure the extent to which unlearning happened through digital trace data?
Critical management studies	Why do organizations need to unlearn?
	What should be the ultimate goal of organizational unlearning?
	What should be the desirable social value of organizational unlearning?
	How can organizational unlearning be leveraged to foster a culture of critical thinking?
	How do power relations influence organizational unlearning processes, and vice versa?

initiated and dynamically unfolding process that aims to discard or reduce undesired knowledge structures over time.

Funding Open access funding provided by University of Liechtenstein. The authors declare that no funds, grants, or other support were received during the preparation of this manuscript.

Data availability The authors do not generate new datasets in this literature review. All articles and works included in this literature review can be accessed through the databases mentioned in the text.

Declarations

Conflict of interest The authors have no relevant financial or non-financial interests to disclose.

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