Managers and Organizational Forgetting: A Synthesis

Abstract

Purpose - This paper evaluated how managers influence accidental and intentional organizational forgetting, i.e., knowledge depreciation, knowledge loss, and unlearning.

Design/methodology/approach - The literature was reviewed based on predetermined search terms to identify peer-reviewed articles published in English and available in full-text format from the EBSCOhost and Google Scholar databases. Empirical and theoretical contributions were included. Additional articles, books, and book chapters were manually selected and included based on recent reviews and syntheses of organizational forgetting work.

Findings - Findings revealed that managers contributed to preventing accidental knowledge depreciation and loss and preserving organizational memory. With respect to intentional forgetting, findings revealed contradictory positions: on the one hand, managers contributed to the disbandment of existing beliefs and frames of reference, but on the other hand, they preserved existing knowledge and power structures.

Research limitations/implications - The study was limited by the accessibility of subscribed journals and databases, research scope, and time span.

Practical implications - This paper provides useful guidelines to managers who need to reduce the disruptive effects of accidental forgetting or plan intentional forgetting, i.e., managed unlearning.

Originality/value - This paper represents a first attempt to review and define the influence of managers on organizational forgetting.

Keywords: Organizational forgetting, knowledge loss, unlearning, managers, agency

Article classification: General review

Introduction

Organizational forgetting refers to "the loss, voluntary or otherwise, of organizational knowledge" (Martin de Holan and Phillips, 2004, p. 1606). Initially conceptualized in relation to learning curves and the depreciation of accumulated experience during production interruptions (Hirsch, 1952; Argote *et al.*, 1990; Epple *et al.*, 1991), the concept of organizational forgetting has evolved over the years, with researchers distinguishing between accidental and intentional forgetting (Martin de Holan and Phillips, 2004). Accidental forgetting includes knowledge loss (or failure to maintain knowledge) and knowledge depreciation (the gradual decay of organizational knowledge). Intentional forgetting, in contrast, refers to purposefully discarding organizational knowledge, a process that has been termed unlearning (Hedberg, 1981; Martin de Holan, 2011). Organizational forgetting has been associated with various organizational constructs and processes, including organizational learning (Day, 1994; Huber, 1991; Visser, 2017), organizational change (Cegarra-Navarro *et al.*, 2010), and memory (Casey and Olivera, 2011).

Although researchers have recognized that managers play an important role in accidental and intentional forgetting, how managers influence organizational forgetting processes is still unclear (Martin de Holan and Phillips, 2004; Martin de Holan, 2011; Mariano and Casey, 2015, 2016). The purpose of this paper is to enhance current understanding of managers' influence on organizational forgetting. We review theoretical and empirical works in the management and organization literature that address the role of managers in organizational knowledge, learning, and forgetting. More specifically, we analyze the extent to which managers play a role in disbanding knowledge, such as dysfunctional organizational routines (Tsang and Zahra, 2008),

or in preventing loss of crucial knowledge from organizational memory structures (Casey and Olivera, 2011; Cegarra-Navarro *et al.*, 2010).

This paper begins by briefly discussing the evolution of the organizational forgetting literature and discussing the methodological design. It then summarizes previous studies and offers suggestions for future research directions for accidental and intentional forgetting and managerial practice. It closes with conclusions.

The Evolution of Organizational Forgetting

A vibrant debate around organizational forgetting that originated in the economic literature (Hirsch, 1952) has developed over the years, producing numerous definitions as well as theorizations in the management and organization literature (e.g., Carlson and Rowe, 1976; Hedberg, 1981; Argote *et al.,* 1990; Huber, 1991; Martin de Holan and Phillips, 2004; Mariano *et al.*, 2015). Organizational forgetting has been linked to organizational learning (Day, 1994; Huber, 1991), organizational change (Cegarra-Navarro *et al.*, 2010), and organizational memory (Casey and Olivera, 2011), and more recent theorizations as well as empirical studies have linked forgetting to organizational strategy (Martin de Holan, 2011; Easterby-Smith and Lyles, 2011) and competitive advantage (Daghfous *et al.*, 2013; Aydin and Gormus, 2015).

Early studies conceptualized organizational forgetting primarily with reference to learning curves (Baloff, 1970; Globerson and Levin, 1987; Smunt and Morton, 1985; Smunt, 1987; Argote *et al.*, 1990; Darr *et al.*, 1995; Epple *et al.*, 1991). Later, organizational forgetting was theorized more broadly as knowledge loss (e.g., Daghfous *et al.*, 2013; Eckardt *et al.*, 2014; Schmitt *et al.*, 2011; Treleaven and Sykes, 2005). More recent theorizations have focused on the construct of unlearning (Hedberg, 1981; Klein, 1989; Nystrom and Starbuck, 1984; Tsang, 2017a, 2017b; Nguyen, 2017). In the management literature, unlearning was first theorized in the

work of Hedberg (1981), although a recent conversation between Nguyen and Starbuck (see Nguyen, 2017) traced its first use to the book *Education and Experience* by Dewey (1938). In his work addressing learning and unlearning, Hedberg (1981) discussed how organizational knowledge could be detrimental and thus needed to be unlearned to make room for new knowledge influenced by the external and internal environments. Following this first theorization, several theoretical and empirical contributions on unlearning appeared (e.g., Klein, 1989; Nystrom and Starbuck, 1984; Tsang, 2008; Martin de Holan, 2011).

From a managerial perspective, the cost of forgetting was highlighted by Carlson and Rowe (1976). The initial debate started with the contribution by Argote *et al.* (1990) on the persistence and transfer of learning in multiple organizations, with empirical evidence in service and manufacturing organizations (Darr *et al.*, 1995; Epple *et al.*, 1991) that confirmed the depreciation of accumulated experiential knowledge over time. Martin de Holan and Phillips's distinction between dissipation/degradation (accidental forgetting) and suspension/purging (intentional forgetting) also represented a crucial trigger point in the debate to better understand the nature of organizational forgetting (Martin de Holan, 2003; Martin de Holan and Phillips, 2004; Martin de Holan *et al.*, 2004). While there is no generally accepted definition of organizational forgetting, their definition of organizational forgetting as the loss of organizational knowledge (Martin de Holan *et al.,* 2004) has had a strong influence on current research.

Some key features in theorizing about organizational forgetting can be identified:

1. *Organizational forgetting exists in organizations and its influence has been empirically documented.* Both quantitative studies (e.g., Argote *et al.*, 1990; Benkard, 2000; Darr *et al.*, 1995; Epple *et al.*, 1991) and qualitative studies (e.g., Martin de Holan and Phillips,

2004; Mariano and Casey, 2016) have produced evidence of knowledge loss, depreciation, and unlearning mechanisms and have investigated underlying explanations for this phenomenon at the organizational level. There are contrasting views about what may enable or hinder organizational forgetting (Easterby-Smith and Lyles, 2011; Mariano and Casey, 2015).

2. *Organizational knowledge is a key component of a multifaceted process of organizational forgetting.* Similar to organizational learning, organizational forgetting is part of the debate about knowledge dynamics in organizations (Mariano and Casey, 2013).

3. *Organizational forgetting can be intentional or accidental.* Recent research has investigated and provided evidence for this crucial dichotomy (Martin de Holan *et al.*, 2004; Martin de Holan and Phillips, 2004) and clarified the type of knowledge involved (either new or old knowledge) and how this shapes managerial decisions and actions.

4. *There is growing evidence that organizational forgetting can be managed* (Martin de Holan, 2011), which is crucial when developing recommendations for how managers can contribute to intentional unlearning or prevent knowledge depreciation and loss.

Methodology

The literature reviewed for this paper built on studies in the management and organization literature with specific reference to organizational knowledge, learning, and organizational forgetting to assess the influence of managers in organizational forgetting. The literature was identified based on the following criteria: peer-reviewed articles, published in the English language, and available in full-text format. Conference papers and working papers were not included. EBSCOhost and Google Scholar databases were screened and searched in title and abstract for terms such as *organizational forgetting, knowledge loss, unlearning, managerial*

influence*, manager*, and *management of knowledge* and their combinations. Both empirical

and theoretical contributions were included, discarding articles that were out of scope (e.g.,

contributions in out-of-scope fields such as medicine, mathematics, and natural science).

Additionally, articles were selected based on recent reviews of organizational forgetting work,

and related books and book chapters that contributed to the debate were included.

Selected articles were entered into Mendeley© reference manager software and coded to

highlight sections referring to managers and managerial influences. From this grounded analysis,

further relevant articles, books, or book chapters were included. All coded excerpts were

reported in tables to facilitate analysis. All contributions are cited and therefore appear in the

reference list. An overview of the studies is provided in Table 1.

Insert Table 1 about here

Summary of Previous Studies

Accidental Forgetting: Preventing Knowledge Depreciation and Loss

Since the first published articles appeared on knowledge depreciation and loss, research

has highlighted the key role of managers in the prevention of accidental organizational forgetting

(e.g., Blackler *et al.*, 1999; Daghfous *et al.*, 2013; Eckardt *et al.*, 2014).

In the area of knowledge depreciation, Baloff (1970) was one of the first to show that

inappropriate managerial actions could lead to misalignment between expected and realized

productivity outcomes, pointing to the importance of a correct evaluation of changes to the

production mix that could have implications for knowledge depreciation. On a similar note,

Argote *et al.* (1990) highlighted the importance of managerial actions in knowledge transfer and

depreciation, proposing that managers could assess factors such as turnover, technological

obsolescence, process change, and loss of repositories or organizational records and their potential influence on the depreciation of organizational knowledge. This view was complemented by the work of Darr *et al.* (1995), who proposed that managers could assess mechanisms such as regular communication, personal acquaintances, and regular meetings that could act as best transfer mechanisms to reduce depreciation. In their analysis of pizza stores, they found that knowledge transfer enacted by these means was less likely to occur between differently owned stores, with detrimental knowledge depreciation consequences (Darr *et al.,* 1995). Assessing the role of managers in these mechanisms could thus lead to a better understanding of knowledge depreciation.

Research has shown contrasting positions on how managers prevent accidental knowledge loss. A group of studies (Engestrom *et al.*, 1990; Blackler *et al.*, 1999; Schmitt *et al.*, 2011; Bratianu and Leon, 2015; Boath and Smith, 2004) proposed that managers should focus on the creation of a network of relationships that could prevent the accidental loss of knowledge due to restructuring, departing employees, downsizing, or failure experiences. Failures experiences, in particular, were found to depreciate more slowly than success experiences, suggesting that managers should encourage their sharing within organizations, as found in studies of organizational learning in the global orbital launch vehicle industry (Madsen and Desai, 2010). Some studies (Lopez and Sune, 2013) proposed that when individuals leave, managers should encourage the codification of their tacit knowledge and individual experience in documents stored in dedicated repositories; others criticized this practice, noting that it might still lead to loss of tacit and heuristic knowledge, especially during downsizing (Treleaven and Sykes, 2005). A reconciling position was found in Daghfous *et al.* (2013), who proposed that during organizational restructuring managers should promote a dedicated position such as knowledge

management director and invest in architectural and technological knowledge to avoid

knowledge loss. In manufacturing firms, if managers who possess production knowledge leave,

knowledge loss was likely to occur (Eckardt *et al.*, 2014; see also Benkard, 2000). Research has

also proposed that the degree of comprehension and perceived relevance of newly introduced

knowledge are likely to influence the longevity of new knowledge (and consequently, the

associated risk of its loss) within organizations (Mariano and Casey, 2016).

> *Thematic Summary 1: Managers can prevent knowledge depreciation through targeted*
> *interventions such as the evaluation of the production mix, the assessment of factors*
> *influencing depreciation (e.g., turnover, technological obsolescence, process change, and*
> *loss of repositories or organizational records), and the implementation of mechanisms to*
> *reduce depreciation (e.g., regular communication, personal acquaintances, and regular*
> *meetings).*

> *Thematic Summary 2: Managers can prevent knowledge loss through purposeful*
> *interventions such as developing relationship networks and technological infrastructures*
> *to promote knowledge sharing and codification, which may prevent knowledge loss due*
> *to restructuring or turnover.*

Accidental Forgetting: Preserving Organizational Memory

Knowledge loss may have a detrimental influence on organizational memory. Therefore, it

is crucial for managers to initiate actions that may prevent its disbandment. Theoretical

contributions (e.g., Casey and Olivera, 2011) have highlighted how managers have the power to

control and manage memory usage and structure, avoiding accidental loss of crucial knowledge.

This position was reinforced by empirical contributions in the aircraft industry (Kleiner *et al.*,

2012) that found that managers and first-line supervisors contributed to the maintenance of

institutional memory during a strike by replacing workers so that knowledge loss was reduced. Similarly, a study in a Spanish startup found that managers acted as knowledge keepers, regulating, reinforcing, or aligning the embeddedness of newly introduced knowledge and routines into the distributed organizational memory of the organization (Mariano and Casey, 2016).

> ***Thematic Summary 3:*** *Managers can preserve organizational memory through the control, management, and maintenance of its usage and structure.*

Intentional Forgetting: Facilitating Organizational Change

A prominent body of literature has investigated the influence of managers on intentional forgetting that contributes to organizational change. This work has addressed the development of a supporting context to facilitate unlearning and change (e.g., Gutierrez *et al.*, 2015; Leal-Rodriguez *et al.*, 2015; Wensley and Cegarra-Navarro, 2015), the link between unlearning and organizational routines (Fiol and O'Connor, 2017a, 2017b), the use of unlearning and relearning to facilitate organizational change (e.g., Rampersad, 2004), and continual organizational metamorphosis derived from cyclical learning and unlearning over time (Morais-Storz and Nguyen, 2017).

Research on how managers contribute to the development of a context to unlearn and, thus, facilitate change, has focused on effortful processes subject to intentionality and agency (Martin de Holan, 2011) that created a nonthreatening (Klein, 1989) and open-minded environment (Sinkula, 2002) to support planning and implementation of new organizational knowledge and practice (Becker, 2010). Research has also proposed techniques such as the use of reassurance and concrete examples (Becker, 2010); informal support (Becker, 2010); behavioral focus, collaboration, incremental orientation, induction, purpose, and symbolism (Klein, 1989); listening to dissent, converting events into learning opportunities, and adopting experimental frames of

reference (Nystrom and Starbuck, 1984; see also Starbuck, 1996); and appreciative inquiry to ensure that a collective understanding for discarding existing knowledge was developed and incentives for contributions were implemented (Srithika and Sanghamitra, 2009).

Research has focused on managerial capacities to promote unlearning and relearning cycles, where managers either promote the evolution of these cycles (i.e., in a mandatory way) or inspire individuals or groups of individuals to enhance them (i.e., in an inductive way) (Zhao *et al.*, 2013; see also Tukel *et al.*, 2008; Carlsson, 1991). With respect to the unlearning of well-established routines, research has pointed out the existence of several subprocesses relating to initial destabilization, ongoing discarding of old routines and experimentation with new routines, and development of a new understanding that enables new behavior (Fiol and O'Connor, 2017b). In this context, groups or individuals who hold power are likely to confer legitimacy to the unlearning process (Fiol and O'Connor, 2017b). Additionally, research has pointed out the key role of feedback mechanisms for performance improvement and monitoring since unlearning directly influences future learning (Huber, 1991; Wong *et al.*, 2012; Starbuck, 1996) and, thus, integrates change (Feldman and Feldman, 2006).

> ***Thematic Summary 4:*** *Managers can facilitate intentional organizational forgetting and, thus, organizational change by developing a supportive context (e.g., through reassurance, concrete examples, informal support, collaboration, listening to dissent, appreciative inquiry, converting events into learning opportunities, and adopting experimental frames of reference) and supporting unlearning-relearning cycles (e.g., information-seeking culture and participative learning systems, reorientation, and feedback), which may involve the disbandment of long-established organizational routines.*

Intentional Forgetting: Preventing Organizational Change and Preserving Existing Power Structures

Some studies have proposed that managers might prevent organizational change to preserve existing power structures. This research has focused on the power exercised by managers to keep existing practices and routines in place (Tsang and Zahra, 2008), preventing unlearning (Nystrom and Starbuck, 1984), with a focus on managerial cognition as a hindrance of change. Other hindrances that have been addressed included conceptual frames of reference (Akgün *et al.*, 2007), top management's blind and rigid ideas (Nystrom and Starbuck, 1984), old beliefs and perceptions that contribute to the rationalization of failure (Fernandez and Sune, 2009), and perceptual errors and self-deceptions of senior managers (Starbuck, 1996). Several researchers (e.g., Hedberg, 1981; Fernandez and Sune, 2009) have proposed the removal of top managers and managerial teams to facilitate fast unlearning (Huber, 1991), allowing for the removal of cognitive structures that might impede change during periods of crisis and reorient organizations (Nystrom and Starbuck, 1984; Sinkula, 2002; Starbuck, 2017).

> ***Thematic Summary 5:*** *Managers can prevent organizational change and preserve existing power structures due to their conceptual frames of reference, old beliefs and perceptions, and perceptual errors and self-deceptions. During critical planned change activities, organizations should rotate managers to other positions or replace them.*

Limitations and Future Research Directions

Accessibility of resources, research scope, and time span represented the major limitations of this study. Some articles were not available due to journal subscription restrictions. Although this assessment was broad in scope, it did not include certain sets of papers, such as those related to learning curves from an economic perspective or those discussing forgetting

processes from disciplines such as medicine. Based on this assessment, future research could be conducted into accidental and intentional organizational forgetting, as discussed in the following sections.

Accidental Organizational Forgetting

Future research in accidental organizational forgetting could investigate how managers contribute to changes to production to reduce accidental knowledge depreciation, clarifying what factors among turnover, technological obsolescence, and loss of repositories can be best managed to reduce knowledge loss and depreciation. Since there is debate about the best methods to reduce knowledge loss—with some studies (e.g., Engestrom *et al.*, 1990; Blackler *et al.*, 1999; Schmitt *et al.*, 2011; Bratianu and Leon, 2015) highlighting relationship networks and others supporting codification and technology-based strategies and infrastructures (Lopez and Sune, 2013)—it would be fruitful to test the two opposing hypotheses. Finally, future research could expand current understanding of the link between managerial control and organizational memory usage and structure. While research has highlighted managers' role in the regulation, reinforcement, and alignment of knowledge throughout distributed memory systems to prevent accidental forgetting in startup contexts (Mariano and Casey, 2016), more work is needed to provide granular descriptions of these internal dynamics in different organizational contexts.

Intentional Organizational Forgetting

Future research in intentional organizational forgetting could clarify when managers facilitate or prevent organizational change. In particular, future studies could extend understanding of the role of unlearning techniques—such as reassurance and concrete examples, informal support, collaboration, listening to dissent, or converting events into learning

opportunities—in organizational change outcomes. Other areas of fruitful investigation involve testing whether the link between unlearning and relearning determines organizational change and to what extent an information-seeking culture, participative learning systems, reorientation, and feedback contribute to unlearning and related organizational change. Additionally, future research could expand and clarify current theorization and empirical investigations into managers' conceptual frames of reference, old beliefs and perceptions, and perceptual errors and self-deceptions that prevent unlearning and organizational change. Different views exist on whether top managers should be removed during periods of crisis (Klein, 1989; Markóczy, 1994); clarifying these contrasting views would be valuable. Similarly, investigations on conflict resolution and processing time during managed unlearning represent fruitful directions for future research.

Conclusions

Managers influence both accidental and intentional organizational forgetting. Regarding accidental forgetting, managers can prevent knowledge depreciation and loss and can preserve organizational memory. Regarding intentional forgetting, managers can facilitate organizational change, but can also prevent change and preserve existing power structures. Through its thematic summaries, this article has provided directions for future empirical studies to either test deductively or discover inductively the mechanisms and relationships that link managerial practices to organizational forgetting processes and outcomes.

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