Leaving Behind What We are Not: Applying a Systems Thinking Perspective to Present Unlearning as an Enabler for Finding the Best Version of the Self

T. Grisold & A. Kaiser

Published online: 23 Feb 2017.

Submit your article to this journal

Article views: 94

View related articles

View Crossmark data

Routledge
Taylor & Francis Group

OPEN ACCESS Check for updates

Leaving Behind What We are Not: Applying a Systems Thinking Perspective to Present Unlearning as an Enabler for Finding the Best Version of the Self

T. Grisold and A. Kaiser

ABSTRACT

In response to criticism on the concept of 'unlearning', we suggested that unlearning on an individual level should be defined as the reduction of the influence of old knowledge on cognitive and/or behavioural processes. In this article, we apply a systems thinking perspective on this definition to explore how far this kind of unlearning can possibly go and what happens if this process is inward-directed, i.e. affects the cognitive and behavioural patterns that define who we are. We take a knowledge perspective on the concept of the self and suggest that unlearning could trigger a disequilibrium, which in turn, enables a deep learning process and guides us to what is referred to as ideal or best version of the self. This does not only have implications for the individual level but it can initiate fundamental change processes in organizations.

Introduction

Since the term unlearning has been proposed in the 1980s (e.g. Hedberg 1981; Nystrom and Starbuck 1984), the idea that organizations should discard obsolete or hindering knowledge for creating new one has been further developed. Several authors (Akgün et al. 2007; Buchen 1999; Klammer and Gueldenberg 2016; Tsang 2008; Yang, Chou, and Chiu 2014) argue that unlearning enables organizations to remain adaptive to a changing and unstable business environment.

However, the concept is controversial. Howells and Scholderer (2016) conclude that research should *forget* unlearning. In Grisold, Kaiser, and Hafner (2017), we summarize major points of critique and by considering perspectives from cognitive science and neuroscience, we propose a new definition. In the following, we will provide a brief review of recent critique and explain how we propose to resolve it.

CONTACT T. Grisold ✉ thomas.grisold@wu.ac.at 🏢 Thomas Grisold, Institute for Information Business, Vienna University of Economics and Business, Austria.

Critique and issues

Howells and Scholderer (2016) argue that knowledge cannot be unlearnt as it has been originally proposed by Hedberg (1981). They point out that the concept rests on erroneous interpretations of psychological experiments; the term is only occasionally used for related processes (e.g. extinction, Bouton 2002), but one cannot eliminate or discard knowledge in a literal sense. 'Unlearning' is not part of the PsycInfo-database, hence, it does not provide the scientific ground to which it explicitly refers.

Furthermore, it is under debate what the difference between learning and unlearning is (Easterby-Smith, Crossan, and Nicolini 2000). In its broadest sense, learning involves the acquisition of new knowledge while unlearning means discarding old knowledge. The idea is that individuals or organizations face conflicts between their knowledge structures and the environment and to catch up with external changes, they must get rid of that (Akgün et al. 2007; Hafner 2015; Tsang and Zahra 2008). Why would this process be any different than learning? After all, learning involves periods of reflection where subjects use meta-cognitive perspectives to see if and to what extend their knowledge is suitable to perform a task (Hickson 2011). For example, Argyris and Schoen (1996) suggest that there are different levels on which learning can take place; as opposed to single-loop learning where subjects slightly adjust and improve their behaviour, they can also engage in double-loop learning to reflect on assumptions, premises or paradigms (Peschl 2007); this refers to a change (e.g. in theory) but it would resemble to what many researchers refer to as unlearning (Howells and Scholderer 2016). Using the term unlearning to describe phases of reflection seems redundant as it would highlight what learning theories already acknowledge. Learning and unlearning would be two sides of the same coin (Easterby-Smith, Crossan, and Nicolini 2000).

A new definition for individual unlearning

Considering these points of critique, we followed a theory-based approach to propose a new model for individual unlearning; we first looked at contemporary theories on how knowledge and cognition are related to then explore how we could provide a sound definition for the term (Grisold, Kaiser, and Hafner 2017). In the following, we will provide a brief summary of our findings.

In line with other researchers in the field of organizational learning and unlearning, we refer to knowledge as a capacity that makes (collective) action possible, i.e. knowledge as a *capacity to act,* which can be manifested on a cognitive as well as a behavioural level (e.g. Holan 2011). Research in psychology, neuroscience and cognitive science suggests that our knowledge is *driven by the past* (Seligman et al. 2013). How we think, act and perceive is affected by what we have learnt. Contemporary research in cognitive science and

neuroscience proposes the predictive coding framework claiming that we inter-act with the world by applying generative models to predict and organize incom-ing sensory signals (Clark 2013, 2016; Hohwy 2013, 2016). These generative models are constructed over time; they provide regularities and structures to the world. The brain is in the process of 'ongoing, input prediction' (Clark 2013: 187) and what we see, feel and hear is driven by top-down processes, which are dependent on past experiences (Clark 2016; Hohwy 2013; Kveraga Ghuman, and Bar 2007). How we think and behave becomes entrenched by a set of causal beliefs, which navigate thinking, perception and behaviour and underlie our assumptions and premises (Riegler 2012); knowledge structures are closely entwined and distributed across neuronal networks. We cannot unlearn knowledge in a literal sense except our brain is damaged or parts are being removed (Hislop et al. 2014; Martin et al. 1996). However, when we accept that our behaviour is driven by past experiences, we can aim to *reduce* the influence of our past experiences. We suggest to resolve disagreements in the field and define unlearning as the *reduction of the influence of old knowledge* in order to create new and less biased behaviour and/or thinking patterns. In Grisold Kaiser, and Hafner (2017), we illustrate how this definition could inform empirical research in knowledge creation and showed that subjects are able to create more radical ideas, i.e. ideas that yield a higher degree of novelty, after they went through a phase of unlearning where they were encour-aged to detach from past experiences.

Research gap and method

Most (empirical) research investigates how unlearning could facilitate the cre-ation of knowledge with respect to challenges that arise in the environment of the individual and/or organization (Hafner 2015; Klammer and Gueldenberg 2016; Tsang 2008). In a way, this research can be seen as being *externally driven,* changing cognitive and behavioural patterns to better perform a task.

Theories on the 'self' state that it is the result of knowledge creating processes. Central to these theories is the idea that there is a better but unknown version of the self and, in order to find it, we should question and *get rid* of existing knowl-edge, values, behaviours and cognitive strategies. However, these approaches remain vague on how such a process could look like and what role knowledge and learning play. In this paper, we use the concept of unlearning to close this gap. We aim at proposing a coherent model for how unlearning, learning and the 'best version of the self' interrelate. We will explore how our proposed definition of unlearning can be *internally driven*, i.e. an inward-directed process, that affects parts of who we are.

The research question guiding this article is:

How can unlearning initiate a deep learning process leading to the best version of our self?

This paper is conceptual and its results should contribute to theory building in the field. In order to approach the research question, we will connect different research streams and see how we can inform theoretical foundations of an inward-directed unlearning process. We will review and present related literature in the fields of philosophy, psychology, knowledge-based management and systems thinking. Furthermore, we will provide a link to organizational learning as there has been an ongoing call for exploring the core identities of organizations and we reason that such an unlearning process could be the starting point for an organizational transformation.

'Self' and 'self-knowledge' are broad terms with different connotations. In its broadest sense, knowledge about the self refers to one's sensations, thoughts and mental states. Gertler (2015) points out that 'self-knowledge' is a controversial topic in epistemology and philosophy of mind circling around several concerns, such as the reliability of our knowledge (Nisbett and Wilson 1977). In this paper, we use the term 'self' in the sense of personal identity. In that respect, the term describes how we view ourselves and what defines who we are. We do not address metaphysical problems (e.g. Shoemaker 1984; Swinburne 1984) but we follow 'psychological continuity views' (Nichols and Bruno 2010; Schechtman 1994), focusing on psychological relations that persist through time. This view goes back to as far as Hume (1978) who stated that the self is a collection of mental events and perceptions. Building upon these foundations, we present positions, which claim that the self may be one among other *possible* versions of the self.

Theoretical background: 'learnt' self versus 'possible' self

Does our current self represent our true self? This question has been debated in philosophy, religion and spirituality. In the realm of spirituality, Rohr (2012) argues that 'the true self is that part of you that knows who you are, and whose you are. Like a diamond, buried deep within, this authentic self must be searched for, uncovered and separated from all the debris of ego that surrounds it'. Similarly Kelly (2010) suggests that by finding legitimate needs, deepest desires and talents, one may be able to find the 'best-version-of-myself'.

The idea that we have a best or ideal version of the self has found its ways into (empirical) research. For example, knowledge management theorist Nonaka (2012) argues that

> [t]o open oneself means to lose oneself [...] 'losing the self to find the self' is not simply the shedding of preconceptions and biases to perceive reality more clearly. It is about overcoming one's self-centered worldview and seeing oneself in terms of one's relationship with others, particularly clients and customers. [...] (p. 61)

Kihlstrom (2012) states that from a cognitive point of view, the self can be seen as a mental representation (p.371). It represents one's knowledge of oneself and

it can be seen as the 'output' of a learning process. In a similar vein, Stam et al. (2014) argue that the self-concept determines the perception and the knowledge of one's self (p. 1175). They differentiate between the self as we currently experience it and a *possible* self. While the former is connected to the present, possible selves are future-oriented parts of the self and they capture who one could become.

Markus and Nurius (1986) suggest that possible selves have cognitive components, such as hopes, fears, goals and threats, and these components create a dynamic to give the specific self a form, meaning, organization and direction (p. 954). Furthermore, they stress that possible selves are a combination of representations of the self that have been constructed in the past and representations of the self in the future (Markus and Nurius 1986: 954). At the same time, representations of the self in future states might not have been verified or confirmed by social experience (p. 955). In the following, we will present approaches that build upon these premises.

Practical applications

Self-modelling

Self-modelling is a process where one models how she could behave in a certain way to subsequently adopt to new behaviour. It can be defined as an extreme case of model similarity in 'observational learning' (Dowrick 2012a: 30), i.e. learning through watching others and replicating the behaviours that were observed (Bandura 1986). There are two types of self-modelling. *Positive self-review* involves selecting 'better' options from typical and known behaviours. It is enabled by episodic memory (Dowrick 2012b: 217). *Feedforward self-modelling* involves constructing a desirable image of the self that represents achievements beyond the individual's current capability. It yields the potential for improvement and rapid changes of behaviour (Dowrick 2012b: 217). One method to realize self-modelling is *video self-modelling*, where subjects perform desired behaviours or versions of their desired selves while they are being recorded. Learning occurs as a result of repeated observation that only depicts desired behaviours (Clare et al. 2000: 517). For example, one wants to stop stuttering; by observing how this would look like when done successfully, how she feels, etc., she may be able to learn the desired behaviour.

Intentional change theory

Another approach that involves generating knowledge about the best version of the self is the Intentional Change Theory (ICT) (Boyatzis 2006; Boyatzis et al. 2013). This theory proposes a process involving a sequence of discontinuities, so-called discoveries, which trigger an iterative change cycle on the individual level.

These discoveries include (1) the ideal self and a personal vision, (2) the real self and its comparison to the ideal self (3) a learning agenda and plan, (4) experimentation with new-found behaviour, thoughts, feelings and/or perceptions, and (5) resonant relationships (Boyatzis 2006: 613).

Within ICT, the best version of the self is referred to as the *ideal* self. It serves as a driver for a personal vision and has three major components. First, the ideal self contains an image of a desired future. Second, the ideal self is emotionally fuelled by hope. Third, the main component of the ideal self is the person's core identity (Boyatzis and Akrivou 2006: 626f.). ICT informed several empirical studies linking emotional intelligence with leader effectiveness. (for example, Amdurer et al. 2013; Boyatzis et al. 2013; Jack et al. 2013; and many others).

Approaches in the field of knowledge-based management

Research on the self has been attracting increasing interest in the fields of knowledge-based management and organizational learning.

For example, Scharmer proposes the *Theory U* as a journey from the old self, which is restricted by past experiences and current limitations, to a (new) 'Self', which is the desired self of an individual or an organization. It describes a multi-step process enabling radical changes on a collective as well as on an individual level. In order to realize one's highest future possibilities, one has to open one's mind, heart and will (Scharmer 2009: 13). He emphasizes that something must 'die' in order to let something new 'be born' (Scharmer 2009: 120).

Similarly, Nonaka and colleagues argue that knowledge creation can be described as a *self-transcending process*, where individuals interact with each other to reach beyond the boundaries of their current situation and transcend the old self into a new self. This is possible when they acquire a new context, a new view of the world and new knowledge; in turn, they change themselves, others, the organization and the environment (Nonaka and Toyama 2005: 421–2). It is a journey 'from being to becoming'. Furthermore, Nonaka (2012) emphasizes the importance to leap to an image of how we want ourselves to be in the future.

Kaiser *et al.* propose two approaches to realize one's best version of the self on an individual level as well as on an organizational level (Kaiser, Feldhusen, and Fordinal 2013; Kaiser and Fordinal 2010). They are based on the idea that the discovery of one's vocation and true self is essential to create a sustainable vision. They argue that a vocation-based and true self-based vision is driven by knowledge about substantial needs, desires and strengths. The guiding questions for this process are: 'What do I need?', 'What do I want?', 'What are my strengths and resources?'

Implications

These findings suggest two crucial implications.

First, there seem to be 'two versions' of the self. On the one hand, there is a self that is based on the subject's current situation including limitations, restrictions,

current possibilities, etc. In a way, it is a compromise between who *wants* to be and *can* be. On the other hand, there may be a best or ideal version of the self which is hidden under the current self.

Second, the self is strongly related to what we know about ourselves. Some authors agree that finding the best or ideal version of the self implies getting rid of knowledge. For example, Scharmer (2009) calls for 'letting go'. Boyatzis and Akrivou (2006) suggest to reduce the influence of the 'ought self' as someone else's interpretation of what a person's ideal self should be. Dowrick (2012a) proposes to get rid of familiar aspects when creating a self-model, and Kaiser Feldhusen, and Fordinal (2013) suggest to overcome the boundaries of the present to discover who one wants to be. At the same time, all authors remain unclear on how such a process can potentially look like from a learning/unlearning perspective.

In the following section, we will propose how a systems thinking perspective on unlearning can close this research gap.

Applying systems thinking on unlearning to find the best version of the self

Constructing knowledge about ourselves

From a systems thinking perspective, we structurally couple with the environment to establish an equilibrium (Dominici 2012; Maturana and Varela 1980; Rubenstein-Montano et al. 2001). Thereby, we create knowledge, which is not *true* in an objective sense but provides viable — i.e. useful — structures that reduce complexity and allow us to interact successfully (Glasersfeld 1995). The system is organizationally closed and self-referential (e.g. Schwarz 2002) and knowledge, which has proven successful in the past, will become the basis for creating further knowledge; reliable behaviour will be integrated into our 'behavioural repertoire' (Bettoni and Eggs 2010; McWilliams 2010; Neimeyer 2009). Riegler (2012) compares this process with a ratchet, where 'the constructions run into canalizations […] or cognitive entrenchments which result from the requirement of assembling and fitting experiences' (p. 247), and Neimeyer (2009) argues that it is like a ladder where hierarchical features build our personal construct system, e.g. assumptions that are formed at *t* give rise for subsequent assumptions at *t+1*, and so on. What we will be doing in the future is implicitly anchored in past and present conditions. With respect the 'self', this could mean that new constructions lead us away from who we really want to be. At the same time, this may explain why the search for the best version of the self is challenging; our planning for the future, i.e. the goals we set, are based on our behaviour and thinking in the present, which in turn, is driven by the past; we can hardly escape this progression.

Unlearning through the end: the loss of goal

When thinking our definition of unlearning through the end, we can assert that reducing the influence of old knowledge would mean that we reduce projections from the past into the future. Knez (2016) emphasizes that it is unique to humans to be capable of planning for the future and meta-cognitively reason and reflect upon it. Oettingen, Pak, and Schnetter (2001) point out that future expectations are based on 'past experiences and thus on a person's performance history' (p. 737). Consequentially, goals that we set are activated by memories, i.e. they arise from past experiences to provide desired end points directing behaviour, evaluation and so on (Fishbach and Ferguson 2007; Oettingen 2012). It follows that goals are progressions of what we think of ourselves in terms of capabilities, strengths and opportunities. They are also dependent on negative experiences, such as failures, which may 'tend to lower their goals, decrease their efforts, and lessen the intensity and effectiveness of their strategy search' (Locke 1996: 120; Moskowitz 2002). In a similar vein, expectancy theory states that our behaviour is dependent on the reinforcing effects that we expect from performing (Bandura 1977; Jones, Corbin, and Fromme 2001), i.e. it relates to experiences that we have made in the past. This suggests a circular organization between our past experiences and future plans, as the goals we pursue seem to organize the environment in a way that we perceive and attune to features that are helpful for us to reach these goals (Clark 2016; Balcetis and Dunning 2006; Bruner 1957; Ferguson and Bargh 2004).

In order to overcome the boundaries of the current self and to search for an ideal or best version of the self, we call for unlearning to reduce the influence of old knowledge to a point where we interact with the world but do not formulate goals towards which we move as this would enable a state where we reconnect with the environment in an unbiased way. If there is no goal, what is it that drives this unlearning process? Here it is crucial to differentiate between *goal* and *intention*. While a goal specifies a concrete end state, which in turn is dependent on expectations, etc., and thus, is hindering for this kind of unlearning, we must have an *intention* to drop familiar and proven routines and practices, and to embrace states of disequilibrium in order to search for the best version of the self. An intention provides motivation to search and find *something* but it does not specify *what* this something is for this will be only known once the unlearning process has been finished and a new learning process initiated (Setiya 2015; Vancouver and Schmitt 1991). The intention, i.e. the conscious and persistent decision to unlearn and search for the ideal or best version of the self, arises from situations where a subject becomes aware that the current self-model is not reliable and satisfying or he/she has the feeling that there are some other, unrecognized, aspects of the self, which should be found.

Establishing a disequilibrium to find the best version of the self

When applying a form of unlearning where we reduce the influence of old knowledge in the proposed way, we would stop the ratchet- or ladder-like progression of knowledge and engage in a process where we embrace the *non-expectation* and the *non-planning*.

From a systems thinking perspective, this means that we disrupt our proven interactions with the environment. We embark on a process where existing constructions are being disrupted, i.e. the equilibrium between our constructions and the environment is challenged while a state of disequilibrium is embraced. This, in turn, may grant us the possibility to reconnect with the environment and initiate a deep learning cycle to create new knowledge about ourselves. Thereby, we may get into a state of a *higher-level* equilibrium. The emerging knowledge can be seen as self-transcending knowledge (Scharmer 2001). Self-transcending knowledge captures knowledge about the source or 'place' where thought and action come into being but are not a linear progression of what has been there before (p. 141). In other words, self-transcending knowledge is the knowledge about the highest future possibility. Thereby, we may come closer to what has previously been described as the best or ideal version of ourselves.

A simple example could be someone who *feels* that she is unhappy with her job. Quitting the job (i.e. dropping the routine) and not knowing what comes next, she is able to see what wants to emerge in terms of new opportunities, feelings, etc. The phase of unlearning would grant her the possibility to recognize new features and patterns and this self-transcending knowledge would come with a higher state of equilibrium. More complex examples would involve situations that are less dependent on concrete manifestations (e.g. being unhappy with the job). They are vaguer as she would feel that *something* feels not right but she must first see what this something is to subsequently drop it and initiate the unlearning process.

Towards a meta model for finding the best version of the self

In short, by thinking our definition of unlearning through the end to reduce the influence of old knowledge to a point where we prevent our expectations, premises, etc. to be projected into the future, we stop using viable behaviour and by experiencing states of disequilibrium and can come closer to our *core* and learn about the best or ideal version of the self.

Building upon these considerations, we can propose a meta model for finding the best version of the self, suggesting that such a process consists of several unlearning — learning — unlearning cycles where the process of unlearning creates a disequilibrium bringing about self-transcending knowledge, which in turn, triggers learning, i.e. the creation of knowledge about unknown features bringing us closer to our ideal self.
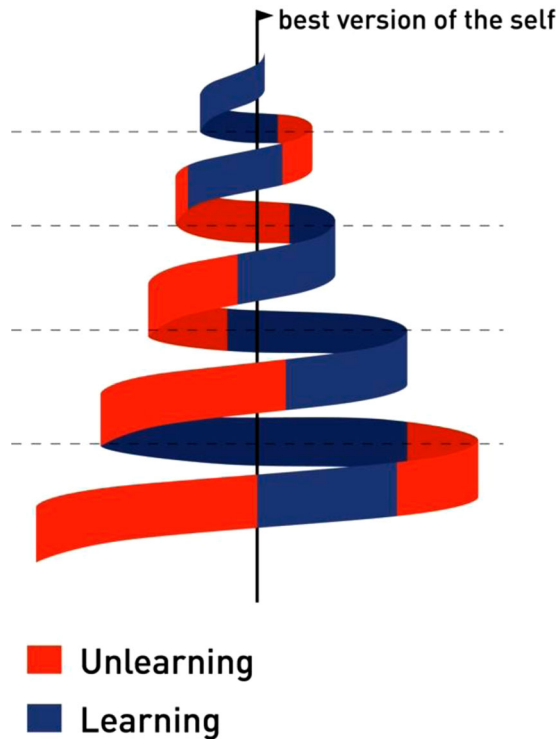
Figure 1. A schematic sketch of the proposed model. An alternation between periods of unlearning and learning brings one closer to the best version of the self. Unlearning is characterized by an intentional but goal-less state. Thereby, new features are recognized, which trigger deep learning processes and lead to higher states of equilibrium.

As depicted in the following schematic graph, we compare this process with a spiral where phases of unlearning inform fundamental learning processes and enable higher states of equilibrium. This process unfolds until one comes close to the ideal version of the self (Figure 1).

By using systems thinking to propose such an inward directed unlearning-learning model, we can provide a framework, which can be *prescriptive* in the sense that we could design fundamental change processes as iterations of unlearning and learning periods (on the individual or on the collective level as it will be shown in the next section). On the other hand, it can be *descriptive* as it could inform existing research about the underlying processes that lead to changes in the self. For example, it has been argued that we tend to think that we do not undergo any serious changes in personality but it turns out that we continuously do so and are always ready for change (cf. '*end of history illusion*' in Quoidbach Gilbert, and Wilson 2013). In that respect, our model may shed light on what happens during these changes and how they can be enabled.

Implications for practice

In the following, we will suggest that systemic coaching can support the proposed kind of unlearning. Furthermore, we will provide a link to organizational learning and change.

Systemic coaching as an enabler for unlearning

Building upon systems theory, systemic coaching helps subjects to recognize patterns of behaviour and forms of feedback, which have been not (consciously) recognized so far, and thereby, it offers new interpretations of their experiences. Furthermore, it embraces a holistic view where various parts of the system may provide relevance to an issue at hand; some parts of the system may even have not been related in the first place (Ives 2008). A systemic coaching model seeks to foreground complexity, unpredictability and contextual factors, and it encourages openness, growth and creativity. It fosters an alternation of stability and instability (Cavanagh 2006, cited in: Ives 2008). The most important 'tool' for systemic coaching is to ask questions; some of them are unusual and challenging for the client, e.g. circular questions, questions about differences, metaphors, scaling questions and several paradoxical interventions, such as exaggeration and putting things into unfamiliar contexts. A focus on solutions and the resources of the subject helps to unsettle the client's construction of her reality. A systemic coaching approach provides a space for reducing the influence of old existing knowledge on cognitive processes by giving up routines and practices that are part of who we are. As proposed in the previous section, we argue that it can foster such a kind of unlearning as the client is being guided into disequilibrium where he/she will make new experiences and create self-transcending knowledge about herself. The emerging knowledge is the basis for reconnecting to the world and one's self and thus, it leads us to the next level towards the best versions of the self. Given the solution-focused focus of systemic coaching, it can be the starting point for developing innovative strategies and solutions.

Implications for organizational learning

Clegg, Kornberger, and Rhodes (2005) point out that when an organization learns, it 'moves, develops and unfolds' (p. 150). Learning implies organizing and thus, they suggest that organizational learning and becoming are closely related. Becoming, however, is only possible when local actors draw on 'broader rules and resources' (Tsoukas and Chia, recited in: Clegg, Kornberger, and Rhodes 2005: 158). Throughout this paper, we focused on the individual level of unlearning. However, when an individual undergoes a change process it may exert an influence on the collective level; both levels stand in interaction and one affects the other (Becker 2005; Crossan, Lane, and White 1999).

We assume that the concept we have outlined here yields implications for the field of organizational learning in the sense that embracing states of disequilibrium, giving up routines and practices can help an organization to redefine, i.e. find a new self-conceptualization. We emphasize that this kind of unlearning is not confined to specific behavioural routines and well-defined tasks, respectively. Reducing the influence of old knowledge can initiate a process where an organization engages in a deep organizational learning process, ultimately raising questions, such as 'Who are we?', 'What can/should we offer'?, 'What are our strengths?' and so on.

As suggested in the field of crisis management (Comfort et al. 2001; Pardo del Val and Martinez Fuentes 2003), a major obstacle for organizations is that they hold on to practices and routines that have proven successful in the best, especially in times where they are the cause for current problems. Therefore, we suggest that unlearning, as conceptualized in this paper, could be an essential strategy for an 'organizational re-birth' (Zell 2003), that is based on its strengths and resources.

Conclusion

Summary

In this conceptual paper, we took a knowledge perspective on the self and propose that unlearning, as the reduction of the influence of old knowledge, can lead us closer to the best version of our self. Underlying this argument is a systems thinking perspective on the concept of unlearning and a knowledge perspective on the self: we construct behaviour (routines, cognitive patterns, etc.) that is viable and defines who we are. By reducing the influence of old knowledge, we give up routines and practices to a point where we do not know what will happen (i.e. we lack planning and goals). We embrace states of disequilibrium enabling us to create new fundamental knowledge about ourselves/the world.

We acknowledge that the idea of uncovering a true self has been ever-recurrent in spiritual wisdom and philosophy, calling for periods of letting go and 'being empty'. We believe that our approach connects contemporary approaches from psychology and (knowledge-based) management and suggests how such a process could look like from an unlearning/learning process.

Limitations and further research

This paper provides a conceptual view on how phases of unlearning and learning could bring us closer to the best version of the self. In bringing together related literature from several fields, we propose an interdisciplinary framework that may explain the processes underlying change processes in existing research.

There is no empirical data to confirm these assumptions and both deductive and inductive work must be done to build actual theories.

First, in order to clarify the proposed process, we suggest that future (empirical) research could elucidate what specific elements are involved in change processes of the self and how they influence the quality of the process. In a similar vein, the process itself should be further explored, i.e. future research should shed light on the meta model as proposed in section 3.4.

We explicitly took a knowledge perspective on the self. We highlight that we did not consider self-theories from biology, neuroscience and cognitive science, where other factors, e.g. the neurocognitive mechanisms, genes, etc. are being considered (Heatherton 2011; Kelley 2012). Future research could propose a more holistic model for the self and investigate to what extend we can unlearn biological predispositions.

We see great potential for the field of organizational learning. Reducing the influence of old knowledge could help an organization to reconnect with the environment, hence, its markets, clients and so on. At the same time, throughout this paper, we did not consider factors that escort and enable such an unlearning process, e.g. resistance to change, resilience and so on. Future research could investigate how such an unlearning process could be facilitated *as a whole*.

Notes on contributors

T. Grisold is a research and teaching associate at the Vienna University of Economics and Business. His research is on (organizational) unlearning. Thomas has an interdisciplinary background in cognitive science, and he is interested in how unlearning is related to the predictive mind theory and what the implications for epistemology and innovation are.

A. Kaiser is associated professor for knowledge-based management at the Vienna University of Business and Economics. He is deputy head of the Institute for Information Business and the Department of Information Systems & Operations Management. His research interests are knowledge-based management, systemic coaching, vision development and enhanced learning theories.

References

Akgün, A. E., J. C. Byrne, G. S. Lynn, and H. Keskin. 2007. "Organizational Unlearning as Changes in Beliefs and Routines in Organizations." *Journal of Organizational Change Management* 20 (6): 794–812.

Amdurer, E., R. E. Boyatzis, A. Saatcioglu, M. L. Smith, and S. N. Taylor. 2013. "Longitudinal Impact of EI, SI and CI Competencies on Career and Life Satisfaction and Career Success." Academy of Management Proceedings.

Argyris, C., and D. Schoen. 1996. *Organizational Learning II*. Reading, MA: Addison-Wesley Publishing Company.

Balcetis, E., and D. Dunning. 2006. "See What You Want to See: Motivational Influences on Visual Perception." *Journal of Personality and Social Psychology* 91 (4): 612–625.

Bandura, A. 1977. "Self-Efficacy: Toward a Unifying Theory of Behavioral Change." *Psychological Review* 84 (2): 191–215.

Bandura, A. 1986. *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs, NJ: Prentice Hall.

Becker, K. L. 2005. "Individual and Organizational Unlearning: Directions for Further Research." *International Journal of Organizational Behaviour* 9 (7): 659–670.

Bettoni, M. C., and C. Eggs. 2010. "User-Centred Knowledge Management: A Constructivist and Socialized View." *Constructivist Foundations* 5 (3): 130–143.

Bouton, M. E. 2002. "Context, Ambiguity, and Unlearning: Sources of Relapse after Behavioral Extinction." *Biological Psychiatry* 52 (10): 976–986.

Boyatzis, R. E. 2006. "An Overview of Intentional Change from a Complexity Perspective." *Journal of Management Development* 25 (7): 607–623.

Boyatzis, R. E., and K. Akrivou. 2006. "The Ideal Self as the Driver of Intentional Change." *Journal of Management Development* 25 (7): 624–642.

Boyatzis, R. E., M. L. Smith, E. Van Oosten, and L. Woolford. 2013. "Developing Resonant Leaders Through Emotional Intelligence, Vision and Coaching." *Organizational Dynamics* 42: 17–24.

Bruner, J. S. 1957. "On Perceptual Readiness." *Psychological Review* 64 (2): 123–152.

Buchen, I. 1999. "Creating the Future: Innovation and the Unlearning Organization." *Foresight* 1 (2): 117–123.

Clare, S. K., W. R. Jenson, T. J. Kehle, and M. A. Bray. 2000. "Self-Modeling as a Treatment for Increasing on-Task Behavior." *Psychology in the Schools* 37 (6): 517–522.

Clark, A. 2013. "Whatever Next? Predictive Brains, Situated Agents, and the Future of Cognitive Science." *Behavioral and Brain Sciences* 36 (3): 233–253.

Clark, A. 2016. *Surfing Uncertainty. Prediction, Action, and the Embodied Mind*. Oxford, New York: Oxford University Press.

Clegg, S. R., M. Kornberger, and C. Rhodes. 2005. "Learning/Becoming/Organizing," 12 (2): 147–167.

Comfort, L. K., Y. Sungu, D. Johnson, and M. Dunn. 2001. "Complex Systems in Crisis: Anticipation and Resilience in Dynamic Environments." *Journal of Contingencies and Crisis Management* 9 (3): 144–158.

Crossan, M. M., H. W. Lane, and R. E. White. 1999. "An Organizational Learning Framework: From Intuition to Institution." *The Academy of Management Review* 24 (4): 522–537.

Dominici, G. 2012. "Business Systems Review Editiorial Note: 'Why Does Systems Thinking Matter?'." *Business Systems Review* 1 (1): 1–2.

Dowrick, P. W. 2012a. "Self Modeling: Expanding the Theories of Learning." *Psychology in the Schools* 49 (1): 30–41.

Dowrick, P. W. 2012b. "Self Model Theory: Learning from the Future." *Wiley Interdisciplinary Reviews: Cognitive Science* 3 (2): 215–230.

Easterby-Smith, M., M. Crossan, and D. Nicolini. 2000. "Organizational Learning: Debates Past, Present and Future." *Journal of Management Studies* 37 (6): 783–796.

Ferguson, M. J., and J. A. Bargh. 2004. "Liking is for Doing: The Effects of Goal Pursuit on Automatic Evaluation." *Journal of Personality and Social Psychology* 87 (5): 557–572.

Fishbach, A., and M. Ferguson. 2007. "The Goal Construct in Social Psychology." In *Social Psychology: Handbook of Basic Principles*, edited by A. Kruglanski and E. Higgins, 490–515. New York, NY: Guilford Press.

Gertler, B. 2015. "Self-Knowledge." In *The Stanford Encyclopedia of Philosophy* (Summer 2015 ed), edited by E. N. Zalta. https://plato.stanford.edu/archives/sum2015/entries/self-knowledge/.

Glasersfeld, E. V. 1995. *Radical Constructivism: A Way of Knowing and Learning*. London: Falmer Press.

Grisold, T., A. Kaiser, and J. Hafner. 2017. "Unlearning Before Creating New Knowledge: A Cognitive Process." In *Proceedings of the Fiftieth Annual Hawaii International Conference on System Sciences (HICSS-50)*, edited by R. H. Sprague, 4614–4623. Waikoloa, US: IEEE Computer Society Press.

Hafner, J. 2015. "Computer System Unlearning in Individuals." System Sciences (HICSS), 2015, 48th Hawaii International Conference on System Science. IEEE.

Heatherton, T. F. 2011. "Neuroscience of Self and Self-Regulation." *Annual Review of Psychology* 62: 363–390.

Hedberg, B. 1981. "How Organizations Learn and Unlearn." In: P. C. Nystrom, and W. H. Starbuck (Eds.), *Handbook of Organizational Design*. Volume 1. London: Cambridge University Press, pp. 2–27.

Hickson, H. 2011. "Critical Reflection: Reflecting on Learning to be Reflective." *Reflective Practice* 12 (6): 829–839.

Hislop, D., S. Bosley, C. R. Coombs, and J. Holland. 2014. "The Process of Individual Unlearning: A Neglected Topic in an Under-Researched Field." *Management Learning* 45 (5): 540–560.

Hohwy, J. 2013. *The Predictive Mind*. Oxford: Oxford University Press.

Hohwy, J. 2016. "Priors in Perception: Top-Down Modulation, Bayesian Perceptual Learning Rate, and Prediction Error Minimization." *Consciousness and Cognition* 47: 75–85.

Holan, P. M. De. 2011. "Organizational Forgetting, Unlearning, and Memory Systems." *Journal of Management Inquiry* 20 (3): 302–304.

Howells, J., and J. Scholderer. 2016. "Forget Unlearning? How an Empirically Unwarranted Concept from Psychology was Imported to Flourish in Management and Organisation Studies." *Management Learning* 47 (4): 443–463.

Hume, D. 1978. *Treatise of Human Nature*. Second Edition. Oxford: Clarendon Press.

Ives, Y. 2008. "What is 'Coaching'? An Exploration of Conflicting Paradigms." *International Journal of Evidence Based Coaching and Mentoring* 6 (2): 100–113.

Jack, A., R. E. Boyatzis, M. S. Khawaja, A. M. Passarelli, and R. L. Leckie. 2013. "Visioning in the Brain: An fMRI Study of Inspirational Coaching and Mentoring." *Social Neuroscience* 8: 369–384.

Jones, B., W. Corbin, and K. Fromme. 2001. "A Review of Expectancy Theory and Alcohol Consumption." *Addiction* 96 (1): 57–72.

Kaiser, A., B. Feldhusen, and B. Fordinal. 2013. "Vision Development as a Knowledge Creating Process." Proceeedings of the 46th Hawaii International Conference on Systems Science. IEEE, pp. 3593–3602.

Kaiser, A., and B. Fordinal. 2010. "Creating a ba for Generating Self-Transcending Knowledge." *Journal of Knowledge Management* 14 (6): 928–942.

Kelly, M. 2010. *Rediscover Catholicism: A Spiritual Guide to Living with Passion, and Purpose*. North Palm Beach: Beacon Publishing.

Kelley, W. M. 2012. "Finding the Self? An Event-Related fMRI Study." *Journal of Cognitive Neuroscience* 14 (5): 785–794.

Kihlstrom, J. F. 2012. "Searching for the Self in Mind and Brain." *Social Cognition* 30 (4): 367–379.

Klammer, A., and S. Gueldenberg. 2016. "Organizational Unlearning and Forgetting – A Systematic Literature Review." Proceedings IFKAD 2016, Dresden, Germany, pp. 306–321.

Knez, I. 2016. "Toward a Model of Work-Related Self: A Narrative Review." *Frontiers in Psychology* 7: 947.

Kveraga, K., A. S. Ghuman, and M. Bar. 2007. "Top-Down Predictions in the Cognitive Brain." *Brain and Cognition* 65 (2): 145–168.

Locke, E. A. 1996. "Motivation Through Goal Setting." *Journal of Applied and Preventive Psychology* 5: 117–124.

Markus, H., and P. Nurius. 1986. "Possible Selves." *American Psychologist* 41 (9): 954–969.

Martin, A., C. L. Wiggs, L. G. Ungerleider, and J. V. Haxby. 1996. "Neural Correlates of Category-Specific Knowledge." *Nature* 379 (6566): 649–652.

Maturana, H. R., and F. J. Varela. 1980. *Autopoiesis and Cognition: The Realization of the Living*. Dordrecht, Boston: Reidel Pub.

McWilliams, S. A. 2010. "Inherent Self, Invented Self, Empty Self: Constructivism, Buddhism, and Psychotherapy." *Counseling and Values* 55 (1): 79–100.

Moskowitz, G. B. 2002. "Preconscious Effects of Temporary Goals on Attention." *Journal of Experimental Social Psychology* 38 (4): 397–404.

Neimeyer, R. 2009. *Constructivist Psychotherapy: Distinct Features*. New York, NY: Routledge.

Nichols, S., and M. Bruno. 2010. "Intuitions about Personal Identity: An Empirical Study." *Philosophical Psychology* 23: 293–312.

Nisbett, R., and T. Wilson. 1977. "Telling more than We can Know: Verbal Reports on Mental Processes." *Psychological Review* 84: 231–259.

Nonaka, I. 2012. Creating New Knowledge the Japanese Way: Indwelling to Outperform, IESE Insight, No. 14, Third Quarter, 58–165.

Nonaka, I., and R. Toyama. 2005. "The Theory of the Knowledge-Creating Firm: Subjectivity, Objectivity and Synthesis." *Industrial and Corporate change* 14 (3): 419–436.

Nystrom, P., and W. H. Starbuck. 1984. "To Avoid Organizational Crisis, Unlearn." *Organizational Dynamics* 12, Spring: 53–65.

Oettingen, G. 2012. "Future Thought and Behaviour Change." *European Review of Social Psychology* 23 (1): 1–63.

Oettingen, G., H. Pak, and K. Schnetter. 2001. "Self-Regulation of Goal Setting: Turning Free Fantasies about the Future into Binding Goals." *Journal of Personality and Social Psychology* 80 (5): 736–53.

Pardo del Val, M., and C. Martinez Fuentes. 2003. "Resistance to Change: A Literature Review and Empirical Study." *Management Decision* 41 (2): 148–155.

Peschl, M. 2007. "Triple-Loop Learning as Foundation for Profound Change, Individual Cultivation, and Radical Innovation. Construction Processes Beyond Scientific and Rational Knowledge Constructivist." *Constructivist Foundations* 2 (2–3): 136–145.

Quoidbach, J., D. T. Gilbert, and T. D. Wilson. 2013. "The End of History Illusion." *Science* 339: 96–98.

Riegler, A. 2012. "Constructivism." In *Paradigms in Theory Construction*, edited by L. L'Abato, 235–255. New York, NY: Springer.

Rohr, R. 2012. *Immortal Diamond: The Search for Our True Self*. San Francisco: John Wiley, and Sons.

Rubenstein-Montano, B., J. Liebowitz, J. Buchwalter, D. McCaw, B. Newman, and K. Rebeck. 2001. "A Systems Thinking Framework for Knowledge Management." *Decision Support Systems* 31 (1): 5–16.

Scharmer, C. O. 2001. "Self-Transcending Knowledge: Sensing and Organizing Around Emerging Opportunities." *Journal of Knowledge Management* 5 (2): 137–151.

Scharmer, C. O. 2009. *Theory U: Learning from the Future as it Emerges*. San Francisco: Berrett-Koehler Publishers.

Schechtman, M. 1994. "The Same and the Same: Two Views of Psychological Continuity." *American Philosophical Quarterly* 31 (3): 199–212.

Schwarz, E. 2002. "Can Real Life Complex Systems be Interpreted with the Usual Dualist Physicalist Epistemology – Or is a Holistic Approach Necessary." Proceedings of the Fifth European Systems Science Congress, Crete.

Seligman, M., P. Railton, R. F. Baumeister, and C. Sripada. 2013. "Navigating into the Future or Driven by the Past." *Perspectives on Psychological Science* 8 (2): 119–141.

Setiya, K. 2015. "Intention." In *The Stanford Encyclopedia of Philosophy (Summer 2015 Edition)*, edited by E. N. Zalta. http://plato.stanford.edu/archives/sum2015/entries/intention/.

Shoemaker, S. 1984. Personal Identity. In: Shoemaker, S. & Swinburne, R. (Eds.), *Personal Identity*. Oxford: Blackwell, pp. 67–132.

Stam, D., R. G. Lord, D. V. Knippenberg, and B. Wisse. 2014. "An Image of Who We Might Become: Vision Communication, Possible Selves, and Vision Pursuit." *Organization Science* 25 (4): 1172–1194.

Swinburne, R. 1984. "Personal Identity: The Dualist Theory." In *Personal Identity*, edited by S. Shoemaker and R. Swinburne, 1–66. Oxford: Blackwell.

Tsang, E. 2008. "Transferring Knowledge to Acquisition Joint Ventures: An Organizational Unlearning Perspective." *Management Learning* 39 (1): 5–20.

Tsang, E., and S. Zahra. 2008. "Organizational Unlearning." *Human Relations* 61 (10): 1435–1462.

Vancouver, J. B., and N. W. Schmitt. 1991. "An Exploratory Examination of Person-Organization Fit: Organizational Goal Congruence." *Personell Psychology* 44 (2): 333–352.

Yang, K.-P., C. Chou, and Y. J. Chiu. 2014. "How Unlearning Affects Radical Innovation: The Dynamics of Social Capital and Slack Resources." *Technological Forecasting and Social Change* 87: 152–163.

Zell, D. 2003. "Organizational Change as a Process of Death, Dying, and Rebirth." *The Journal of Applied Behavioral Science* 39 (1): 73–96.