The Shifting Paradigm: Learning to Unlearn

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ABSTRACT

In order to be able to fully benefit from the enormous amount of openly available data and also from competitive advantages that new forms of learning may provide, do we need to learn to *unlearn* in order to bypass any biases already acquired? Do we need to free our minds first to enable new learning trajectories? The knowledge--learning--power paradigm is changing and it tends to become the *unlearning* – the ability to extract relevant knowledge, that supersedes.

Societal changes in recent years are challenging the ways knowledge is produced and distributed. Seen as the main resource in present-day society, knowledge has been an increasingly source of power. The learning-power paradigm continue to shift. If the '70s - '80s question was how to learn, through '90s – 2000s it moved to how fast and how much we can learn. Now the question becomes how much can we unlearn? If this is the case, we need to develop skills that help us to let go of old rules.

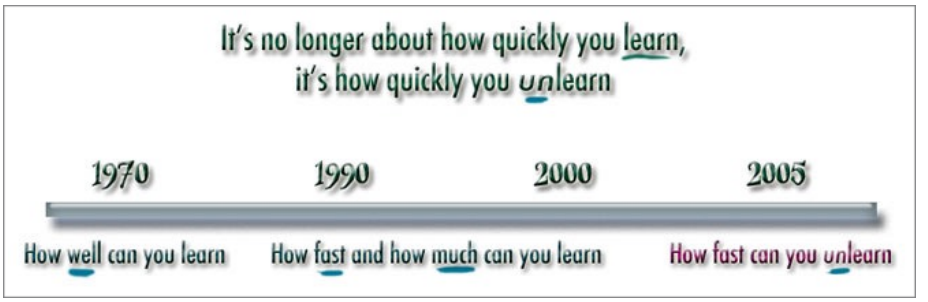

Figure 1. A timeline illustrating decades associated with how and how fast we learn. source: http://headrush.typepad.com

Patreman (1997) discusses barriers that often prevent *unlearning* from occurring and that are contributors to living in an acquisitive society. *Unlearning* is not about forgetting something, but rather more about rejecting a previously-held belief or repudiating a long-revered theory.

Curricula today are designed around learning as something one *acquires*—from a learning acquisition-based society to a society where we learn to unlearn odd knowledge and to deal with substantial amounts of information (e.g., big data).

Theories of Learning: Where Does Unlearning Originate?

Society is in such a tremendous flurry of change that it cannot be questioned if anytime soon a big part of what we currently know and assume to be right will become wrong. Not un-updated, but completely wrong. This will not be a question of learning, but a question of *unlearning* and *relearning*.

Albeit this new form of learning may not be taken seriously as an actual theory, and is largely presented by learning specialists in a more informal way (blogs) rather than in a formal one (scientific articles), *unlearning* is not going to be simple.

According to Cirnu (2008) learning is comprised of two different dimensions--**tacit** an**d explicit** Social interaction between individuals is the basic requirement for creating, cumulating, and transferring both tacit and explicit knowledge. The transfer of knowledge intensifies when social and cultural exchanges increase among individuals. In this instance, knowledge may be purposefully transferred, or it may be transferred as an outcome of other unrelated activities (Roberts, 2001). According to Zack (1999), tacit knowledge is understood and applied subconsciously, is difficult to articulate, is developed from direct experience and action and is usually shared through interactive conversation, storytelling, and shared experiences. Creating and transferring tacit knowledge requires 'shared observation' (Leonard & Sensiper, 1998) and 'social networks' (Lam, 2000). In this view, the explicit represents concepts, facts, and theories, while tacit involves practices that are used to complete tasks.. The core theories of learning are dependent upon the existence of prior knowledge in order for *unlearning* to occur. a

The ***cognitivist theory of learning*****,** educators address the power of analogies to bypass students' misconceptions, and then develop two related analogies as a desired "target" or new form of learning that a student does not initially accept. The first analogy is an "anchor," and serves as an example comparable to the target, but one that the student can accept based on intuition or day-to-day experience. The second analogy is a "bridge," an intellectual midway point that shares features of both the target and the anchor. More than just directing students to the analogies in a textbook (the traditional approach), the educator actually engages students in a process of analogical reasoning in an interactive teaching environment, and uses the analogies to enrich students' view of the target rather than helping them view the target more abstractly.

Early cognitive theories examine the role of "proactive interference and inhibition" or the interference of old and new knowledge in the context of successive memorization of word lists. Other cognitivists examine the role of prior knowledge in learning. Piaget stressed the role of knowledge structures and their reformulation through the processes of assimilation (i.e., incorporating new information into existing structures), accommodation (i.e., incorporating new information by revising existing structures) and equilibration (i.e., the overall interaction between existing ways of thinking and new experiences). He states that we achieve states of more complex, satisfactory, and stable equilibriums with the environment through successive reformulations.

On the other hand, Dewey (1938) explored the role of problematic experience in stimulating inquiry. He concluded that we feel confused, uncertain, and unable to coordinate prior knowledge and habit to meet the demands of the present moment during the experiments. Additionally, Vygotsky (1978) highlighted the role of social interaction in the reconstruction of prior knowledge. He explored the "zone of proximal development" or the difference between what a learner can do without help, and the capabilities of the same learner engaged in interactions with others.

One of the fathers of ***constructivism*****,** Bruner's theoretical framework (1961) is based on the theme that learners construct new ideas or concepts stemming from existing knowledge. Learning is an active process that includes a) selection and transformation of information, b) decision-making, c) generating hypotheses, and d) making meaning from information and experiences.

Further, Bruner's theories stress the significance of categorization in learning. Bruner (as cited in Anderson, 1998) expands this significance by emphasizing that "To perceive is to categorize, to conceptualize is to categorize, to learn is to form categories, to make decisions is to categorize." Interpreting information and experiences by similarities and differences is a key concept.

Most of the learning we experience is continually added to our existing knowledge therefore in order for the facilitation of *unlearning* to occur we must begin with the tacit dimension. We as learners, are reliant upon tacit knowledge, therefore we cannot bypass what we rely on. Most of what constitutes tacit knowledge is the fact that many times we are not even aware of the knowledge that we possess; therefore the process of modifying our own tacit knowledge can be very difficult and challenging and even impossible for some to change. his/her own.

The ***behaviorist*** theory approaches learning as new stimulus-and-response sets that allow learners to forge through powerful external reinforcements. In this light, the

unlearning process takes place in two ways: 1) through a process of removal of reinforcements, and 2) through the apposition of "reciprocal behaviours" or the introduction of a stimulus that strikes a response different from the usual response in a given situation.

The behaviorist literature suggests several ways of promoting unlearning in the service of new and better learning. Gagne and Briggs (1975), proposed an eight-point lesson plan--a fusion of the behaviorist and cognitivist traditions, where instructors engage students' prior knowledge early on before introducing new material.

Dawson et. al. (1997) summarized the concept of ***meditational learning***. This theory provides a distinctive pedagogy that addresses the major issues of unlearning and relearning when individuals face change in their prior habits, skills, or concepts. Educators are able to control and redirect proactive inhibition and thus control *the unlearning process* as follows: a) they present a learning model that explains the need for meditational learning strategies to students; b) the process uses students' knowledge, beliefs, and ideas of a concept; and c) differentiation of words are used in a technical manner from their common sense usage and then explicit instruction of the concept with opportunities for students to rehearse important aspects of it is provided. Also, a comparison of old and new concepts from multiple perspectives and the generalization of the new concept to at least six novel applications or problem solving situations are requested.

What is *Unlearning*?

To illustrate the notion of unlearning, it is necessary to rely on a shared understanding of learning. The most common approach related to learning in terms of content, respectively facts and concepts we know and/or knowledge in a specific domain (e.g. finance, psychology, history). However, taking into account various types of knowledge--not only the declarative knowledge (knowing that) but also procedural knowledge (knowing how) that refers to ways of acting upon information in distinct situations. Unless we are in the early stages of learning, such knowledge is often tacit. In crisis situations newer and less stable learning will inevitably cave into older learning, however misguided it is. Below is an example of how we cave into older learning and how much effort is needed to conquer it.

To view video go to http://devour.com/video/the-backwards-brain-bicycle/

Personal values that dictate attitudes and their reflection in how we behave also represent an important domain of learning. If, for example, students believe that learning is a matter of natural ability rather than effort, they will be unlikely to try very hard in the face of the slightest adversity.

Learning, Unlearning, and Relearning in Corporate Industries

Learning, unlearning and relearning have deep implications in present-day societies--not only in the academic domain, but also in the progress and productivity of companies. Employees enter companies or specific positions in companies with habits and assumptions either from school or previous positions, and thereby have difficulties coping with rapid changes into various domains.

Breaking down previous barriers and patterns is needed. Either to be able to grasp the latest initiative, to embrace a new workplace culture or to deal with changing scientific theories, employees may need to go through the process of unlearning what they have previously learned. In this particular situation, there are two clear choices: 1) either the employer needs to teach employees to unlearn, 2) or the employee will need to practice self-regulation by learning to unlearn by himself/herself in order to gain competitive advantage. As our society continues to evolve amid the existence of the unlearning process, there will eventually be a need for research delving deeper into such scenarios—especially as the

affordances of unlearning will gradually emerge within the social and collective behaviors of large companies/organizations and in turn, to employees; therefore making unlearning a necessity rather than an option in our competitive world.

The concept of unlearning is intrinsically bound to the concept of change. Shaner (2010) believes learning leaders must first discover the level of knowledge a potential employee already possesses before trying to change their existing beliefs and habits. Therefore, first and foremost, in order to benefit from unlearning, we first need to unearth old roots. Shaner explains further by stating that *"senior management often makes the mistake of trying to teach learners without first asking important questions such as 'What are those habits? Where is the cynicism when it comes to change programs?' The designers of the learning initiative have to understand where the student is at any given time"*. He argues that biologically, we cannot entirely unlearn something, but we can put effort into the assimilation of new learning and training, with the provision to replace old ideas with new ones.

Oftentimes, having previous information serves as a barrier to change. Leaders need to first assess this information, and then based upon this assessment, try to implement new patterns. Patterson (*Kerry Patterson, co-founder of VitalSmarts*) argues that employees have *"years of cognitive mass that are counter to what you're telling them. They won't do what you ask, and rightfully so. You need to first demonstrate why (they) need to change."*

To easily understand the importance of unlearning and relearning in the corporate sector, it may help to pose common, everyday situations whereby a company is acquired by another company and employees are urged to unlearn the ways of their previous positions in order to become part of the new company. Similarly, when modifying business strategies, companies that invest in the time and money to integrate the unlearning and relearning process into on-boarding training of new employees will clearly reap the benefits in the long term. In short, the core concept is that in order to learn new skills, it is necessary to let the old ways of doing things, go.

CONCLUSIONS

Learning, unlearning and relearning requires on-going training and assessment or self-regulation. Either a company seeks to change the behavior(s) of an employee or seeks change at the organizational level, and needs to clearly articulate the goals of such unlearning. To successfully drive organizational change, leadership--no matter the trade, discipline, field or sector must be mindful to ensure that those who they are leading clearly understand the collective mission and vision of the organization, but even further the drivers behind the change, but to further understand the drivers behind the change and what is

needed in terms of training, development and support they are ultimately trying to implement.

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