ScienceStrength: Essential Expertise for Learning and Performance Specialists

Your edge to optimal growth in people and organizations

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Why Coaching?
Implicit Memory and Change

Trainers, coaches, and leaders all face the difficult task of facilitating and maintaining change in individuals. The most brilliant organizational development initiatives often take a course of early success followed by a loss of impact over time. Similarly, well-designed training programs teach new knowledge and skills that initially transfer to the workplace only to gradually fall out of use as workers return to previous work patterns. How is it that individual behavioral and attitudinal factors so often prevent change, even when individuals desire the change?

Neuroscience provides us with an answer, and points us toward tools for loosening the hold of strong, persistent personal patterns. It all has to do with implicit memory. But let's start at the beginning . . .

Many scientists now believe there are two distinct kinds of long-term memory.

- Explicit memory is of facts and experiences – things we know consciously and can talk about, like how to use a new software program or what we wore to the office yesterday.

- Implicit memory has to do with nonconscious ways of being, such as how we walk or deep-seated personality traits.

Recent neuroscience is demonstrating that these two types of memory are represented differently in the brain. Memory, in both cases, is a function of groups of neurons (called neural assemblies) which fire together in association with the stimuli involved. Recent research has shown that patterns of neuronal firing can, and do, change throughout the lifespan. Scientists call this characteristic of the brain "plasticity." It means that contrary to the old picture of the brain as "hardwired," the wiring and structure of the brain changes with experience.

In explicit memory, the neural assemblies in use are primarily those in the hippocampus and the rhinal region of the brain - what's called the medial temporal lobe memory system. Implicit memory works very differently. Rather than being represented in one region of the brain, these memories call into play neural assemblies in the many cortical regions associated with the initial perceptions. So, for example, the cortical regions mediating visual, auditory, and kinesthetic stimuli work together to form a widespread representation of the memory.

Here's the difference: While the medial temporal lobe memory system contains neural pathways that both send to and receive information from cortical regions involved in consciousness, the implicit memory pathways do not. Hence these memories are much less likely to enter awareness. In other words, we don't know that we know these things. The memories operate on a nonconscious level.

The implications for behavior change are profound. In attempting to change nonconscious patterns, we must first bring the patterns and the associated clusters of memories to awareness. Often, we don't even address these issues - we give people the knowledge of how to do something and assume they'll be able to do it. This is not the case. How many times have you known a behavior you wanted to change and how to change it – only to find yourself time and time again falling back into your old ways of doing things? In these cases, it is not a matter of what we know! It requires an ongoing learning process during which the individual is supported in looking at persistent habits that get in the way and bringing these patterns to awareness so conscious choice can occur.

Coaching is a business strategy that addresses this challenge. As an individual strives to learn new ways of working, the coach is there to look "from the outside." The coaches who understand techniques for directly impacting neural connections will be able to guide the individual toward finding strategies for extinguishing deep-seated habits that are barriers to change.

In any change initiative, astute leaders and trainers will build in a coaching adjunct process that enables individuals to apply their newly-gained knowledge. Information alone is not enough – It takes ongoing vigilance and effort to create new behaviors and attitudes.

Leaders of organizations, take note! Large-scale cultural changes require people to change deep-seated ways of working and interacting. It is inevitable that you and your employees will be up against personality and behavioral patterns that are beyond your current awareness. An understanding that people need time and assistance to make the changes will improve the long-term results of any change initiative. It doesn't happen overnight and, often, in the initial stages it will look like your workers are resisting the change. If you hold to your vision while offering continual support and a sense of humor through the difficulties, you'll begin to see the changes you desire become established and be maintained.

References

LeDoux, J. (2002). The Synaptic Self: How Our Brains Become Who We Are. New York, NY: Penguin Putnam.

Galpin, T. (1996). The Human Side of Change: A Practical Guide to Organization Redesign. San Francisco, CA: Jossey-Bass.

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Join us for more information about the brain and change by attending our presentation at PRODN on November 25, 2003 http://www.prodn.org/programs/0304/2003-11-25.htm

Or attend our upcoming classes in 2004 in Princeton, King of Prussia, or Washington DC.