The International Consortium For Coaching In Organizations

CoachLeader Update

March 2007 Volume 1, Issue 1

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Coaching Leadership

A note from ICCO's President

The ICCO community: organizations committed to coaching, internal and external coaches, researchers and educators, has evolved the need for a more regular communication vehicle. *CoachLeader Update* was born as ICCO's organ – to share foundational insights, outstanding practices as well as ICCO community news. These brief and impactful articles and contributions will have several sources: ICCO's TeleForum calls, our high-level Symposia, as well as research and best practices published in the *International Journal of Coaching in Organizations* (IJCO) – the foremost journal of the profession.

In this inaugural issue of *CoachLeader Update* we discuss the implications for organizational coaching of findings from an exciting and rapidly expanding field of study: neurobiology. Our guide through this field is one of today's major neurobiology researchers: Dr. Robert Sapolsky. His interview by coach and author Marcia Reynolds is an abridgement from the second 2006 issue of the IJCO (www.ijco.info). In addition, David Rock summarizes his institute's insights about "brain-based coaching," which some of you will have also enjoyed on the November 2006 TeleForum call. We conclude this issue of *CoachLeader Update* by raising Eight Queries that are evoked by neurobiological research findings.

In the sprit of great coaching, we invite YOUR questions and queries in future issues. What questions do you ask yourself about coaching theory and practice, organizational processes and challenges in setting up first class coaching programs, coach training issues ... and other queries? We will publish your best questions and provide an on-line discussion space for the ICCO community.

ICCO's board members and committee contributors are greatly enjoying their interactions. Write us to join and be involved: info@coachingconsortium.org !

Agnes Mura, President

Upcoming ICCO Events (More details on page 7)

TeleForum February 15th at 12:00 PM EST: The Impact and Value of Executive Coaching

Washington, D. C., Symposium (III) - *Dates:* April 19-21, 2007

Mexico City, Mexico Symposium (IV) - Dates: May 24-25, 2007

Seattle, WA Symposium (V) - *Dates:* June 14-15, 2007

FOR DETAILED INFORMATION ON EACH SYMPOSIUM, VISIT

http://www.coachingconsortium.org

Zebras and Lions in the Workplace; An interview with Robert Sapolsky

Dr. Robert Sapolsky interviewed by executive coach **Marcia Reynolds**

When it comes to understanding why people do what they do, we cannot ignore the biological reasons for behavior. Leaders need to take into consideration physiological responses both in the environments they create and the requests they make to individuals within the organization. This interview with a leading figure in the field of neurobiology explores the effects of stress on productivity and learning. It includes what are optimal levels of stress, how to deal with our mental wiring that promotes the resistance to change, and how to create a "benevolent environment" that encourages risk-taking and innovation.

Dr. Sapolsky: When you're talking about what most people attribute to "memory," such as explicit memory (declarative, such as facts and descriptions) and implicit memory (procedural such as reflexive, motor actions), you get this sort of inverse pattern. First, a little bit of stress does wonders for enhancing memory, it increases glucose and oxygen delivery to the brain, strengthens synaptic communication, and finally increases the occurrence of LTP (i.e., *long-term potentiation* - the phenomenon that describes the synapses learning and strengthening). For under about two hours or so stress is therefore beneficial. By the time it's gone on for four hours, you're pretty much back to base line. Once it goes beyond four hours, and for some people constantly for up to 70 years, everything goes in the opposite direction. The learning capacity gets worse; less glucose and oxygen are delivered to the brain. Neurons in the hippocampus can actually be damaged and shrivel up. You stop making new neurons in that part of the brain.

So you don't want to get rid of stress. You want to have just transient moderate stressors, which we call *stimulation*. What's most striking about that is how transient, moderate stressors, not only do all those good things, they make you feel great. They cause the brain to release dopamine in a region where that chemical has a lot to do with pleasure and anticipation. But again, once it turns into chronic stress, the dopamine levels get depleted, which means loss of pleasure, depression and worse. So what winds up being the relevant question is calibration: *what is one person's stimulation is another person's depression. Where are the limits? How much stress should someone welcome into their day, and when do they turn it off?*

On the other hand, let's look at implicit, anxiety-related learning, such as learning fear responses. In that realm, we are looking at a different part of the brain - the *amygdala*. Here, every type of stress makes that part of the brain work better, faster, and grow new connections, as the synapses are more excitable. That's the case with trauma, that's post-traumatic stress disorder; you show someone subliminal pictures (ones that don't even register in the cortex) and the metabolic reactions light up. When you have a person with post-traumatic stress disorder, the light stays on. Because what stress does is cause that part of the brain to work better than it's supposed to. It doesn't get damaged. People don't forget what they fear! It is unpredictable what can activate this type of memory, even in the workplace.

Marcia Reynolds*:* In advance and during a big lay-off, for example, what is the damage from this type of fear?

Dr. Sapolsky: There are some studies showing that the increase in blood pressure you get when people are getting laid off, doesn't come when people are actually getting laid off, it comes with the first threat of it. So the

damage comes when people are marinating in anticipation, in the *threat menace*, which can last for months or years. It's the anxiety over the future that has the worst effect. You don't just turn on your stress response when you've been slashed by a predator, or when you've lost your job. The menace of occupational stressors is as bad as and as overwhelming to the physiology of the body as the disasters themselves.

Marcia Reynolds*:* I would like to look a little deeper at learning and emotions. In the book, *Why Zebras Don't Get Ulcers* , you indicated there must be emotions for learning to occur, that the brain has to feel that something is worthy of being remembered for the potentiation to happen.

Dr. Sapolsky: Absolutely, this goes back to stimulation. Someone who found out that their whole family just got killed in a car accident and someone who just found out that their cancer was misdiagnosed and is going to live... their hearts are going to do similar things in both cases. The physiology of extreme arousal *is* the physiology of extreme arousal. Stress hormones couldn't care less what your heart's beating faster about. Their job is to make sure your heart doesn't run out of energy in order to deal with the situation.

No matter what, you have to have emotional involvement which comes through active participation. It's going back to John Dewey, in terms of learning and active processing. There is the classic study in the 60's that showed when you raise rats in an enriched environment with other rats, their brains develop better and they learn better as adults. Their cortex and neurons are better developed. Then, they put a rat in that same environment but in a little cage, so it doesn't get to do the stuff with other rats. The rat only gets to watch, not participate: You don't get the neuron changes in this case! Apparently, it's the active participation and emotional involvement that creates growth. This activates their stimulation, feeling that what they are doing counts. That's where you get the curve optimized.

Cognitively turning moderate transient stressors into an actual setting, I think, would translate into what is called a "benevolent setting," where the dominant feeling is "maybe." People are actively exploring new possibilities where they are not certain things are going to work out but they're not feeling hopeless, ever. There is always a good possibility of success. Even on a bad day where it doesn't look like it will happen at all, you know that the see-saw on the fulcrum will tilt your way at some point. The resources are available and there is a pretty good chance you are going to pull it off.

It's going to take some effort though, and it is not guaranteed. You still need to modulate the possibility of success so it is not "too" certain. There was an amazing study a couple of years ago, that was looking at the correlation of dopamine and reward. What everyone originally thought was that after an animal gets its reward, up goes dopamine. That's not what happens. The rise came when the test animals are just starting the process and felt pretty confident of the results - "I'm on top of this, this is going to be great, I've got this under control" - that's when the rise in level occurred. So *the stimulus is the anticipation of reward, not the reward itself.*

There was this brilliant follow-up study done. Now, instead of the monkey doing tasks and then getting a reward, it does the task and only gets the reward 50% of the time. The relevant part of the brain dumped out dopamine levels like no one has ever seen in the business, because you've introduced that element of "maybe." Shift the reward rate from a 50% likelihood to either a 75% or 25% likelihood of reward (these are diametrically opposite, one of them "the world is getting more reliably better", the other is "the world is getting more reliably worse") and with either condition, you don't get as much of a rise in the dopamine. 50% is right at that fulcrum of "maybe."

People who think of psychological stress carry on endlessly about how a lack of control is extremely stressful, and an assembly line of workers who have no autonomy can't function well. But you see here, a *lack of control with some predictability* is incredibly pleasurable.

Marcia Reynolds*:* What are other conditions that optimize such full engagement?

Dr. Sapolsky: That's where the benevolence comes in. The difference concerns the context in which the activity is embedded. Lack of control in a malevolent setting is going to lead to a bad diagnosis. People don't know what is going to happen, and it is not likely to be good. Contrast this with a lack of control in a benevolent setting and you have people feeling: "this roller coaster ride is going to be scary and unpredictable but we're not anticipating being decapitated during it." In a benevolent setting, the unpredictability is sheer stimulation and excitement.

Marcia Reynolds: These are important insights. I believe your work can provide invaluable information for those of us who coach our clients to "re-create" their organizations to be more successful and more humane.

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Endnote

[1] Robert Sapolsky. "Open season." *The New Yorker*, 1998.

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Robert Sapolsky, Ph.D is a MacArthur "Genius" Fellow, a professor of biology and neurology at Stanford University, and a research associate with the Institute of Primate Research at the National Museum of Kenya. In addition to *A Primate's Memoir*, which won the 2001 Bay Area Book Reviewers Award in nonfiction, Sapolsky has written three other books, including *The Trouble with Testosterone* and *Why Zebras Don't Get Ulcers*. His articles have appeared in publications such as *Discover, Scientific American* and *The New Yorker*, and a new collection of essays, *Monkeyluv and Other Essays on our Lives as Animals*, was published in Fall, 2005

Eight Points to Ponder:

Neuroscience Implications for Organizational Coaching

By William Bergquist

The following recent discoveries and their implications have been formulated to be used as "animators" for dialogue during the coming ICCO Symposia.

1. Habitual behavior requires the shifting of knowledge and skill-sets from focused, intentional and explicit (conscious) memory systems to another memory system, located in a different part of the brain (often called "procedural" memory). This second memory system is holistic, much less accessible to intention and implicit (unconscious) in nature. When coaches try to "break up" the habitual behavior of their clients, they may be trying to move stored material between two different memory systems. Resistance to the disruption of habitual behavior may be based not only in our fear of changing established behavior patterns, but also in the profoundly difficult task of moving stored memories back from the implicit system to the explicit system where these memories were first formed.

2. Our social/psychological constructs (paradigms, schemata, left-column beliefs and assumptions) may be much more deeply embedded in and reinforced through complex, highly-redundant and multiple-level neural connections and networks than we had previously thought to be the case. To examine — let alone attempt to "break up"- these constructs may be quite difficult and the outcomes of such a disruption may be difficult to predict.

3. We immediately process all (or most) incoming stimuli through "templates" in our Amygdala (mid-brain). We process these same stimuli through our cerebral cortex at a later point (1 or 2 seconds later) and more slowly. In most cases, we eventually temper the immediate reactions of our Amygdala by means of this more

"rational" cortical analysis. The Amygdala "templates" are applied to each incoming stimulus to determine whether or not this stimulus represents a threat to us ,or perhaps an opportunity for personal pleasure (Osgood's Semantic Differential: good/bad, active/passive, strong/weak). Many of these Amygdala templates are probably established early in our life or may actually be "hard-wired" (Jung's archetypes?).

4. We establish "stress ruts" when exposed repeatedly to either real or imagined threats. These ruts are grooved deeper with each stressful event and lead to permanent structural changes in our nervous/hormonal systems. We become increasingly vulnerable ("trigger happy") to stress. Managing cognitive and emotional learning with a client under such sustained stressful influences is a significant coaching challenge.

5. Our daily behavior is profoundly impacted by our patterns/decisions regarding sleep, exercise, exposure to light, and the consumption of alcohol, tobacco and other mind-altering drugs, including caffeine (over 250 mg/day). It may be hard to assist other people until they are "physiologically primed/prepared" for this assistance, and have, for example, reduced their intake of mind-altering substances.

6. The neurochemistry associated with the formation of intimate (love) relationships appears to be quite different from the neurochemistry associated with the formation of friendships. In both cases, powerful, chemically-based bonds are formed and these bonds are reinforced whenever our intimate or friend appears before us – our body literally "lights up" with neuro-chemical responses.

   As to the nature of the neuro-chemical reactions of a patient in psychotherapy (especially when it is long-term and depth oriented): they resemble more closely that of an intimate relationship than that of a friendship—and these neuro-chemicals are released in both the patient and therapist. The processes psychologists called "transference" and "counter-transference" may be something more than the replication of patterns and images from previous intimate relationships (including parents). Rather, these processes may involve the release of neuro-chemicals that are the same as those released in our intimate relationships. It remains to be studied whether the coaching relationship operates more like a friendship or an intimate relationship. What are the implications for our profession if coaching, like therapy, releases neuro-chemicals that replicate intimate relationships?

7. One of the most difficult things for human beings to do (with regard to neuro-processing) is to move from thought to action. A large portion of our brain "lights up" when we make the decision to do something (what in the old days we would call "will power.") These are precisely the areas of the brain that are often vulnerable to clinical depression. It would seem, from this neuroscience finding, that some of the most difficult (and perhaps most important) work that coaches do is assist their clients in moving from thought to action , even when faced with moods of discouragement.

8. Another finding that may hold major implications for the field of organizational coaching concerns the apparent presence of *mirror neurons* in our neuro-physiological system. In a series of controversial research projects and articles, it has been proposed that certain neurons will fire when a person is observing someone else doing a task and these neurons tend to mimic the neuronal firings of the person being observed. Thus, when we watch someone performing a physical act, mirror neurons will fire that mimic the neuronal firings in the person being observed, creating what looks like learning.

   Many scientists believe that mirror neurons also help us *understand* the intentions behind the action of others, and possibly the social meaning of their behaviors and emotions. Furthermore, they believe that the evolution of our mirror neurons probably facilitated the evolution of language and simultaneously the evolution of culture.

How do these mirror neurons relate to the formation of empathy (both in the client and coach)? To what extent does an effective coach "understand" her client in part because some of her own neurons are firing in ways that mirror the experiences and actions of her client? Role modeling and apprenticeships are some of the coach-related applications of such thinking.

Training coaches using a brain-based approach

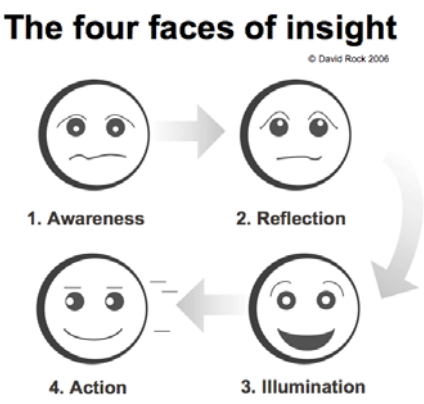
Most of us know that coaching works, but few people know why or how. Over the last 4 years, Results Coaching Systems has developed an explanation of coaching based on the latest discoveries about the brain. Through partnering with leading neuroscientists, researching two books, and designing an international conference (www.neuroleadership.org), David Rock and his organization are finding that knowledge of the brain-basis of coaching will:

- Increase the support for coaching by academically-trained executives
- Help coach-training participants take coaching more seriously
- Open up creative new ways of training coaches at scale
- Increase the impact of training
- Improve the quality of coaching itself

This last reason is perhaps the most important. Many human interventions throughout history have benefited when science discovered the active component of a particular craft, for example when hypnosis was eventually found to be a function of the brain entering a trance state, and nothing to do with magnets.

Attention please

We now know, from a neuroscience perspective, that coaching is a function of "self-directed neuroplasticity®," a phrase coined by neuroscientist Jeffrey Schwartz. In other words, coaches help clients rewire their own brains. We also now know that neuroplasticity is a function of attention. Our attention changes the brain, our focus impacts the circuits that we make and embed moment to moment. We also know that the brain is more quickly and more deeply attracted to problems than solutions, so it's important to mitigate against this.



The four faces of insight

When we have an insight, the brain is naturally driven to change, without insight change tends to be naturally resisted. We also now know about some of the mechanics of insight in the brain, and thus can begin to increase the likelihood of insights. A recent test of these ideas, involving over 50 business leaders, found that 75% of them were able to have an insight that resolved a long-term business challenge in 5 minutes of coaching. The coaches, also business leaders, had been taught the brain based approach and techniques for under 2 hours. The reason for their success was

the following process: The coach increased the likelihood of *insight* by simplifying an issue to its core, allowing our small working memory to get to work; then the coach quietened the clients' mind, to allow new connections to occur; next, the coach paid attention to where the client naturally wanted to make connections. A picture of this model is below.

APPLYING THIS APPROACH

The brain-based approach is being introduced in several large organizations, across 7 countries, in two forms:

1. Internal coach certification: These are programs to train and certify in-house coaches, to drive induction or transition programs, or work with high potentials.

2. Coaching skills programs, providing short intensive learning across whole communities.

One example of the second options involves training several thousand managers to be better coaches, using training techniques built on these theories as well: facilitating awareness, reflection, illumination and action in small learning steps, over time, without any in-person classroom time (teleconference only). Despite the general resistance to this idea initially, the initial impact studies of the programs have shown that behavior change is occurring.

In summary, having a brain basis for coaching is providing an important new dimension to the field of coaching, and one that should continue to contribute to the field for some time to come.

RESOURCES

The brain based approach to coaching was introduced in 'Quiet Leadership', the book published in April 2006 by David Rock. A broader discussion of these ideas can be found in an article called 'A brain-based approach to coaching', *The International Journal of Coaching in Organizations*, 2006, issue 2. For more resources see www.workplacecoaching.com or www.davidrockblog.blogspot.com

www.coachingconsortium.org
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The International Consortium For Coaching In Organizations

Upcoming ICCO Events:

TELE-FORUM:

February 15th at 12:00 PM EST:

The Impact and Value of Executive Coaching: Research Findings and Practical Considerations

Facilitator: Barry Schlosser
Discussants: Derek Steinbrenner and Ellen Kumata

Contact info@coachingconsortium.org to register and receive the call-in number!

SYMPOSIA:

You are invited to these exclusive events, whose attendance is limited to a maximum of 30 participants in order to ensure in-depth work, intimate dialogue and meaningful networking opportunities.

Washington, D. C., Symposium (III)

Dates: April 19-21, 2007

Theme: Addressing Global Challenges through Organizational Coaching

Mexico City, Mexico Symposium (IV)

Dates: May 24-25, 2007

Theme: Una cultura de exito dentro de las organizaciones en Latinoamérica

(Cultures of Success for Companies operating in Latin-America)

Seattle, WA Symposium (V)

Dates: June 14-15, 2007

Theme: The Neurosciences and Organizational Coaching

Symposium Fees:
$395.00 members rate
$550.00 non-members
Two lunches and several snacks are included

For registration information, go to http://www.coachingconsortium.org