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Edited by Joe Cheal

Oakhurst, Mardens Hill, Crowborough, East Sussex, TN6 1XL, UK.

Tel (+44) 1892 309205

Email joe@imaginariumdev.com

The Association of NLP

Apsley Mills Cottage, Stationers Place, Hemel Hempstead, HP3 9RH, UK.

(+44) 20 3051 6740

www.anlp.org

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Journal Contents

'Neuro-Coaching' – A Humanistic, Facilitative Approach to 'Aha!' Experiences

Angus McLeod, PhD

Abstract

A model is shown describing different levels of psychological processing in coachees, in terms of their observable physiology. Manifestations in the coachee are described for both intellectualizing psychological states and for internalized, experiential, psychological states .

This work suggests strongly that certain coach-interventions induce significant state-change in coachees (as observed). Five of forty facilitative coach-intervention skills are described, in order to illustrate their practical use in facilitating significant psychological change in coachees.

Linkages are made between facilitative coaching interventions and neuro-science; how changes in biochemistry can accompany stimulation of neurology during coaching. These linkages are intended to help describe a (work-in-progress) concept of 'neuro-coaching'. An attempt to describe such 'neuro-coaching' is made in order to create discussion; it is averred that a new discipline may arise, where links between the understanding of how facilitative coaching interventions work and their possible influence in neuroplastic change, may align in the future.

Key Words

Neuro-coaching, neuroscience, skills, interventions, state-change, learning.

Introduction

Continuing studies and co-work in the areas of facilitative coaching and neuro-science are producing hopeful signs of linkages between certain coaching skills and neurological states that are thought to create neuroplastic change in the brain (Thompson & Collingwood, 2006 for example). Evidence here, at the very least, shows that certain coaching-interventions create observable changes in coachees.

This article is based upon the scenario of 1-2-1 facilitative coaching (in the same coaching space).

Setting scenes for neuro-coaching

What follows is set out to offer distinctions that could form part of the definitions of an evolving discipline.

Boundaries for neuro-coaching

Setting coachee-expectations prior to a coaching-journey may be practically the same for neuro-coaching as they are for any professional, facilitative coaching journey (see box).

Setting Scenes Implicitly – Some Key Factors for all Facilitative Coaching

- Confidentiality
- Commitment
- Presuppositions
- Time Expectations
- Openness and Honesty
- Challenge & Stretching
- Emotional experiencing
- Ownership of the Agenda
- Notes policy
- Examples of practice norms/expectations
- Boundaries of behaviour.

Setting a thematic approach for neuro-coaching

Neuro-surgeon and psychoneuro-immunologist, Ian Weinberg, avers (2014) that neuroplastic change occurs in his patients when three coaching outcomes are present. These are:

- Purposeful motivation
- Sense of achievement (gratification) and,
- Enriched environment.

Within a facilitative-coaching context, that 'enriched environment' may be expected to be positivistic and focussed on self-empowering successes. 'Gratification' coming from self-acknowledged success, can fuel more successes. Positivistic approaches are considered to activate neuro-plastic change (Luz & Davidson et al, 2007). All the run-up communication

to the coaching-journey, as well as the coaching itself, can be underpinned by focussing on 'now' and the 'future', on positive outcomes and rapport. A coach might also be expected to counter/challenge negativity (Palmer, S. & Szymanska, K. 2007).

Rapport and a neuro-science perspective on neuro-coaching

Mirror-neurons are specialist brain cells that react when an action is performed by the owner of these neurons (and/or when the same action is witnessed in another being). The mirror-neurons may therefore be important in learning by mimicry. Mirror-neurons in the brain appear to be stimulated when we are empathetic and in rapport (Rossi 2006). The components of rapport put forward by Weinberg in this process are:

- perceived empathy
- trust and belief
- a positivistic setting.

That is: in an environment that includes mindsets that are positive, rather than negative or neutral. The mirror-neurons trigger the release of the hormone and neuro-modulator, ocytocin (see box). Oxytocin improves trust (Kosfeld 2005; Baumgartner 2008). Hence, rapport in the facilitative-coaching relationship <u>further increases</u> relational trust (due to oxytocin-release). Ocytocin also suppresses the fear-anxiety centre (the amygdala) and starts the biochemical changes that lead to learning states, or 'socially reinforced learning and empathy' (Hurlemann et al, 2010). In effect, rapport appears to be a basis for a positive, engaged, psychological state and to contribute to learning.

When rapport is coupled with facilitative coaching , we might expect to see a significant improvement in the coachee's psychological-states, including expressions and behaviours that can arise from trust and empathy.

Gratification, specifically where this gratification is higher than was expected, is modulated by the neurotransmitter, dopamine; the production of dopamine is related to synaptic plasticity in the brain (Schultz 1998). Synaptic plasticity describes the growth of new connections between neurons in the brain. It is synaptic plasticity that leads to new neural-connectivity; setting new pathways that react to patterns experienced in the environment. We can think of this synaptic plasticity as developing new 'hard-wiring'. It appears that the reward of <u>exceeding</u> expectations may be an enjoyable experience for the coachee, but also one that is linked biochemically with neuroplastic change in the brain.

Oxytocin – A Positive Neuro-modulator

Oxytocin (OT) is produced by the hypothalamus and stored in the posterior pituitary gland. OT is released when we are in rapport. In other contexts, OT is also released when receiving pleasant, light touches and by activation of the parasympathetic nervous system, for example, by eating, drinking and digesting.

Establishing rapport in neuro-coaching

It follows, if the above discussion is true, that rapport may be affected positively by facilitative coaching, within an enriched, positivistic environment. The coachee may be facilitated to:

1. purposeful motivation, and
2. a sense of achievement above expectation (gratification).

Your author believes that one observed key to enhancing rapport, is asking questions that lend themselves to coachee self-interest, self-learning and self-regulation. Many coaches ask questions to inform themselves – because they do not yet know how to proceed. In contrast, asking questions for the enlightenment of the coachee, may well be a possible stand-alone approach to coaching cleanly.

Another aspect of rapport-building that may be significant, is that the coach exhibits both attention and genuine, empathetic interest in the coachee. In that case, one can expect the neuro-coach to ask questions that help the coachee to develop interest in their own insights, their own beliefs, and their own meanings, to: "bring out the best of that person's understanding and awareness of purpose, self, and the larger systems to which he or she belongs" (Dilts, R. 2003).

A coachee may become surprised and interested in their own internal processing; fascinated by themselves; intrigued by similarities and differences with others. These learnings may be thought common to the development, in the longer-term, of Emotional Intelligence (McLeod, 2002).

The journey of rapport

Rapport-building may start before coach and coachee engage 1-2-1. Invariably, there will have been other communications between coach and coachee before sessions commence. Indeed, there is invariably an assumed level of trust in the coach before the coachee and coach connect (McLeod, 2007). This assumed level of trust will be variable from one

relationship to another, dependant upon multifactorial aspects that may include prejudices.

From a basic NLP perspective, before a coach had any contact with a new coachee, the coach would be matching. When together, matching (and cross-matching) behaviours might also be advised. Rapport can be improved then, by graceful mirroring activities (matching) by the coach. If we take on board the proposed approach including the facilitations of purposeful motivation, sense of 'achievement above expectation' (gratification) and an enriched, positivistic environment, then a number of other influencing strategies arise that are worthy of note and discussion:

> Early questions may be gently probing, while establishing further trust, and may develop emotional-investment by the coachee. If the coachee experiences consistent and repeated experiences with positive outcomes, they may develop increasing trust in their coach.

> The biochemical changes created by rapport can enhance trust and 'loss of fear'. As the feeling of safety within the coaching relationship increases, the coach could increase the challenge in their questions, without risking the qualities of the coaching dynamic. The measurement of the levels of challenge is experienced by, and hence best expressed by, the coachee. In practice, this measurement can be facilitated by asking a calibration question. For example, 'If ten was the maximum level of tolerable challenge in my coaching, what levels did you reach in this session?'

Other considerations concerning rapport

Many coaches believe that a chat-based dialogue is necessary before coaching begins per se. The research undertaken here, indicates that when coach and coachee first meet, there is no need for a 'chat' before coaching begins. This is borne out by the speed at which a coachee willingly goes into deeply-reflective psychological states, in this study, typically well under one minutes from the point at which they sit down for coaching.

The skilled neuro-coach might therefore use all their rapport skills (associated with a facilitation modality) immediately. This immediate facilitation-mode enables the coach to bring just one persona into the coaching dynamic. When there is a two-stage process (1. chatting, followed by 2. coaching), the coach is in effect displaying two separate persona. The two-persona approach may be questionable – what may be the effect of one person displaying two personas on the development of rapport and trust for a coachee? It may well be considered that a single persona, that of the coachee-focussed, facilitating coach,

could engender trust more successfully, more often, but this question remains to be tested in research.

Another potential advantage of using facilitating questions from the outset (as in the study), is that the coachee may associate (anchor) their learning-states with their coach (especially where the coachee explores their inner-world in periods of increasing introspection). The coach may become a trigger for learning-states in the coachee.

Depths of learning in neuro-coaching

In neuro-coaching, other aspects of questioning may arise.

As the coaching journey progresses, we may hope that the coachee is engaged, responsive and willing to explore their thinking and their inner-world more deeply. As described above, loss of fear associated with changing neuro-chemistry, may allow for more challenging questions. These challenging questions may 'shock' the pre-frontal lobe of the coachee to create learning and revelation. Within the positivistic setting described earlier, challenges may be ideal for synaptic plasticity, new neural pathways and learning.

Questioning can continue to create self-interest in the environment (including their relationships with their environment and with their intra-personal, internal explorations). The coach can encourage the coachee via meta-questioning (Hall & Duval, 2004), to establish new meanings and understanding about their level of change. These questions can re-value their experiences, beliefs, identity and behaviours. All of these can be gap-managed against desired outcomes.

Questions may also be designed to increase the coachee's ability to control and change their responses to their environment, to increase their self-determination and levels of gratification (by exceeding their expectations). The questioning can keep moving positively towards change and solutions in which the coachee is largely, or wholly, self-reliant. The coach is, in effect, 'parenting' the coachee to highly functional independence.

Coachee states, from intellectual to trance

Learning states are recognized as important to psychological change-work (Bolstad, 2002). The neuro-coach may be acutely aware of where the coachee has their psychological attention. The extremes of coachee attention suggested here are:

1. Highly external focus on the coach and coaching space and,
2. Highly internal processing/experiencing states, or actual trance.

Facilitative coaching is capable of creating variable levels of internally-focussed states - these states may explain why coachees may not recall the detail of successful intervention strategies made while they were being coached; when questioned later by the audience, or by their coach, in a public coaching master-class, the coachee often has no recollection of the coaching detail, but do recollect the effect on their state (McLeod 2009).

Four levels of state may be useful for neuro-coaches, in order to map and follow the needs of the coachee. The four levels of state proposed (McLeod, 2011) move from engaged states to deep introspection:

1.   Intellectualizing Spontaneously
2.   Intellectual Accessing
3.   Trance-like Events – Self-reflective experiencing
4.   Trance-like Events with pauses of more than 2 seconds (sometimes minutes).

Intellectual Responses	**1.** **Engaged Conversational Fluid dynamic ~ Animation**
	2. **As above Plus Engaged pauses**
Trance-like Events	**3.** **Disengaged Internal No animation**
	4. **As above Plus Events > 2 secs**

Level 1: Intellectualizing Spontaneously

The coachee is engaged, responsive and lively. If they are not, then their need may be for better rapport (leading to raised ocytocin), or, they are simply not in readiness for coaching at this time.

If in rapport, at Level 1, the Coachee will exhibit some or all of the following:

- Typically, some level of eye-contact with the coach
- Variable animation including, often, gestures of emphasis
- Rapid answering.

Level 2: Intellectual Accessing

The coachee has all the Level 1 characteristics, but there are short episodes where the coachee is more noticeably accessing information. These short episodes may only last for parts of a second. The slightly higher effort involved in answering, may be due to the questions being more probing and challenging; the coachee has to dig deeper to look for the information.

The coachee may also exhibit:

- Very short periods of silence, typically while remaining energized and engaged
- Rapid eye-movements, perhaps associated with accessing memory.

Level 3: Deeper Level Processing – Trance-like Events

At Level 3, the model suggests that the coachee no longer has easily-accessible memory (in order to find the answer to a question) and is now having to construct new meanings from internal processing. These new meanings will be advised, no doubt, on information and linkages, based upon their prior and current, experiencing. For example, a coach may ask the coachee to focus their attention on a movement they made, or what may be happening in part of their body (when the coachee talks about a particular experience or objective). The short episodes of internal processing follow the stimulus of the question (or just the first few words of the question). These episodes typically last less than 2 seconds, during which the coachee may exhibit some (or all) of the following:

- Defocus of vision and, mostly-steady eye position (possibly with some rapid, accessing movements)
- Muscle relaxation and loss of muscle tones generally:
    - o Slight nod of head
    - o Relaxation in jaw

       o Droop in posture
- Shallow breathing & heart-rate
- Silence
- Cessation of physical movement/tics.

When studying coaching video, our researchers track and record the changes into and out of the levels. In many cases, there may be one or more repeated physical tics (movements) at Levels 1 and 2. For example, a foot may be twitching (at Levels 1 & 2), but as they enter Level 3., the tic instantly stops. Seconds later (or longer), the tic will often start again, this happens as the coachee re-enters the 'outside world' of their experience (Levels 1 & 2). Very often, if the coach is graceful and quiet, the coachee will slide back into their internal, Level 3 state, without further intervention by the coach. There can be, in effect, a subtle dance of coaching within the dynamic.

Level 4: Deeper Level Processing - Trance-like Events >2 seconds

All the characteristics of Level 3 continue, but for longer periods. Some features of Level 3 physiology (listed above) may be exaggerated during the first few seconds at Level 4. The additional features may include:

- Subliminal breathing rate
- Reducing pallor in skin tones.

The Four levels of processing and neuro-coaching journeys

The Level that the coachee exhibits can be tracked by observation. An amalgam of three coaching sessions (with one coach) has been averaged to show a schematic of such a journey. In all three cases, the coachees moved to Level 3 and Level 4 within a minute or so of sitting down and working, for the first time, with an expert facilitating-coach in a master-class setting. Time zero on the schematic is the moment of sitting down and commencement of coaching.

The diagram shows the average length of time the coachee spends at each level, in the early stages of coaching. Later in the coaching session, Level 4 states may last for several minutes. These longer episodes even occur where the room may have forty (or many more) observer-coaches, microphones, cameras, lights and other paraphernalia of stage-work.

Coach response to the Levels

The neuro-coach will facilitate the coachee to Levels 3 and 4 so they make new meanings and learning from their internal 'experiencing' states. Coachee-learning can be reinforced by the coach using questions related to their current objective. But, the coach may also question so that the learning is applied more widely, in other contexts that may be of use to the coachee (and their organisation, for example).

Neuro-coaching skills

In research, we have established forty coaching skills that are effective by observation, in moving a coachee into Levels 3 & 4. A sub-set of these forty skills appear to be very useful in maintaining the deeper learning states. The forty skills so far established in continuing research, have been identified by repeated viewing of video taken from coaching master-classes. A number of these skills are introduced below and a fuller list will be published at the conclusion of the research project. In each case, coach-behaviours are recorded where they are repeated several times and where consistent change is evidenced by the verbal record in the transcript. The objective of the coach and any effect that results from the use of the skill (recorded by the coachee or as observed by the researcher) are noted.

Typical outcomes that follow episodes at Level 4 (and to be reported later) include: new meaning, new understanding, high energy & motivation. These outcomes are explicit from the dialogue of the coachee, also recorded in the larger research methodology. In more extreme cases, highly significant 'Aha!' moments may result from these deeper levels of experiencing and learning. A coachee may become very animated, gratified (smiling & self-confident) and obviously excited.

Forty skills or more

Our research team, with help from others, may discover even more skills for optimal neuro-coaching. The intention is to do this by modelling additional professional, masterful coaches, to look for confirmation about the wider use of the skills. Also, to seek out other skills that may lead to Level 4 processing, where these are coupled with enervated outcomes. We have been using the work of Lawley & Tompkins (2012). Their REPROC Model maps coachee-attention in reaction to questions posed by the facilitator/coach.

Mapping coachee-answers was found to reveal attention is six areas, viz: resource, explanation, problem, remedy, outcome and change.

Of the forty skills, some are linked to a recurring pattern in coaches - this pattern is that of Reflective Language (McLeod, 2003). Before we go to examples, let's define Reflective Language.

Reflective Language

Reflective Language (RL) is the re-use of the coachee's word, words, phrases or part-phrases, reflected back by the coach, one or more times, sometimes without any further expression on the part of the coach, sometimes with, and for, a number of different purposes.

These purposes include:

1. To challenge the coachee to re-think meaning in their own words
   o by replaying RL back to them, typically only once and without comment; just a silent pause for the coachee to go into internal states and reflect/experience their learning, often at Level 3 or Level 4
2. To provide the base for a question that creates deeper learning in the coachee.
   o The RL intervention, if used with the correct attitude, pace, timbre and volume, does not need any conscious interpretation by the coachee. The RL works its way into the mind of the coachee via the 'neural pathway' that created it. As no intellectualizing is required, the RL invariably leads to a deeper level of learning experience. This learning experience may endure for seconds, or many minutes at Level 4
3. To trigger the coachee to go back into their learning state, when the coachee has momentarily started to be more consciously-aware of the external world (e.g. room or coach) or is distracted by noise, for example.
   o Using RL again, the coach may facilitate an immediate response in the coachee; they return to their learning experience, often for a longer period and typically, with significant learning. Sometimes, repetition may be made three or more times before the coachee achieves significant learning and expresses something of that learning. These repeated coach-interventions are made as the coachee moves from Level 4 to Level 1. The repeated interventions often trigger the coachee to return immediately into Levels 3 & 4.

Five Examples using Reflective Language

Many of the forty neuro-coaching skills, so far identified, are examples where the coach is 'following the material of the coachee' rather than introducing any new interventions or coach-information. This is to be expected, because the neuro-coaching skills are predominantly of a facilitative nature. The facilitative form of coaching is always predicated on working with the coachee's material rather than introducing new material from the mind of the coach. Here are just five examples of the use of RL together with a coaching intervention, including the codec (short-hand) we have developed for each neuro-coaching skill in parenthesis.

1. Repeat word/s only (F+/W/State):
   - The RL is used to re-trigger the deeper levels of learning (where the coachee is moving from Levels 4/3 into Level 2/1), or, to deepen an existing level of introspective, inner exploration. The choice of words is predicated upon observation and significance at their first use by the coachee. If the coachee enters into trance-like state, or if the words are significant but the coachee appears unassociated with their significance, the RL may prove effective when repeated by the coach afterwards.
2. Repeat word/s and seek metaphor (F+/W/Mphor):
   - Typically, the RL will include one or more of the coachee's significant words without the need of grammar, or, a phrase followed by the question, "And that is like?" This is the classic metaphor question. A metaphor expressed by the coachee may be deeply personal and significant. The coaching can then work with that metaphor to explore meaning and change. A coachee with a restrictive metaphor may benefit from exploration of a 'desired' metaphoric symbolism too. The coach can then facilitate gap-management, from the old symbol/metaphor to the new in their 'metaphor landscape' (Lawley, J. & Tompkins, P. 2000).
3. Repeat word/s and softly trail off (F+/W/T):
   - This skill requires the facilitative coach to have enhanced acuity of changes in coachee-state, from the extremes of 'externally aware' (Levels 1 & 2), to 'inner experiencing' (Levels 3 & 4), and all points in-between. As a coachee descends into inner-processing, the coach is able to let their voice diminish and trail-off. The first objective of trail-off is to reduce the external distraction (coach voice). Secondly, at an unconscious level, the coachee's mind may also be further encouraged to go inward - in the same way that we go to sleep as attention to our external environment reduces. This is conjecture, not fact, but may be

significant. In any case, video analyses show that outcomes invariably follow this expertly-practiced art.

4. Repeat word/s softly, two, three, four or more times. (F+/W/Soft):

- The ability to notice psychological state, can work dynamically to follow the coachee's deeper levels of learning. If the coachee starts to come back into the external world, the skilled coach can softly play back the same RL (word/phrase) that triggered the initial learning-state. The more acutely-aware the coach is to the subtleties of these changes, the quicker the coach responds; the coachee then remains in a slowly shifting learning-state, sometimes less deep, sometimes at increasing depths, until a greater level of significant-learning surfaces. The subtle dance of facilitative-coaching is clearly exhibited in the repeated use of this skill.

5. Repeat word/s and challenge (F+/W/Ch):

- The RL is followed by a challenging question (or statement) and sometimes includes RL from an earlier coachee-expression. The technique is often followed by significant coachee-learning.

Some readers may wonder why the author asserts that grammar is no longer necessary in this dance of facilitative coaching. The dance for the coachee is between predominantly external and predominantly internal psychological states. We have found that Reflective Language (RL), using one or more words (used earlier by the coachee), and often with deleted grammar, is never questioned/rejected by the coachee. It appears that significant words and phrases trigger changed psychological-states in many coachees. Examples, below, are from actual video, during coaching sessions, where RL has created state-changes. In each case, the coachee has moved into Level 3 & then Level 4 in a period of silence (often much longer than 2 seconds) before their learning is expressed.

Research Example 1

Coachee: "I do trust myself now, because I can feel that energy and determination building, and when I have that, things happen."

Coach: "Things happen…" (F+/W/Soft)

Coachee: "So, I feel really comfortable with that."

Coach: "Does 'comfortable' do it for you?" (F+/W/Ch). Coachee enters Level 4.

Coachee: "It's a certainty that I will take action!"

Research Example 2

Coachee: "I'm almost ready, but not ready."

Coach: "Eventually there will be a change but not today..." (C/Summ = Coach Summary)….

Coachee: "Well it is today. It is today!"

Research Example 3

Coach: "How did it go?"

Coachee: "It just evolved... brick by brick".

Coach: "Brick by brick..." (F+/W/State = RL and state-facilitation) x2…..

Coachee: "It was easy!"

Research Example 4

Coach: "So, knowing that, about getting some momentum and letting the project be real and developing stuff, knowing all that, does this do it for you..." (F+/W/Ch)

Coachee: "Yeah, yeah (nodding in agreement) it does because..."

Coach: "Does it really do it for you.......compared to then?" (F+/W/Ch)….

Coachee: "So, compared to then, I'm talking about things I would have given my life for. That's pretty powerful!"

AHA! Learning: Embedding learning in one or more steps

Highly significant learning is sometimes referred to as an AHA! moment. At their extremes, 'AHA!' learning is accompanied by emotions that may display as surprise, delight, enervation, motivation or shock (for example, expressed surprise that they waited so long to gain their learning).

Very significant coachee-learning is invariably tested by the coachee and used from then onwards. Lower levels of significant learning may require a time-plan of testing, reassessment and re-testing. This process of test and re-test can be coached; the coachee finding and committing to a proven methodology that suits their preferences and which

they are certain will be successful. Thus, a significant learning, or 'AHA!' may in some people lead to immediate and sustainable success over the longer term. In another person, a period of convincing (via test and re-test) may be needed, before the learning is embedded and sustainable. One solution does not suit all!

Conclusion & Acknowledgements

The reported work offers a snap-shot from a wealth of data from our facilitative-coaching research and is not meant to be complete. There are linkages made with neuro-science and psycho-neuro-immunology and the changing biochemistry that may accompany coaching. I have touched on this only by reference to hormones including neuro-transmitters.

Certain coach-interventions induce significant state-change in coachees. A number have been provided as examples. A model is shown that describes four levels of coachee-state based upon observable physiology present in the coachee. Documentary evidence of actual coachee-enlightenment including 'AHA!' episodes have also been recorded and remain to be published. Five of forty interventions are described, in order to illustrate the practical use of coaching research and coaching skills in facilitating significant psychological change in coachees.

Acknowledgements

Biography

Dr Angus McLeod works internationally as a coach. He is Visiting Professor of Coaching at Birmingham City Business School. Websites: http://angusmcleod.com & http://coachingfoundation.org Contact: ourinfo@angusmcleod.com

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