The Brain, the Flow & the Learning Process

Compilation of Rachel's articles
2012-2020

"Neurolanguage Coaching® is the efficient and fast transfer of language knowledge and skills from the Language Coach to the Language Coachee with sustainable effects facilitated by brain based coaching, coaching principles and neuroscience"

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Index

INTRODUCTION

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Over the past ten years, I have constantly been on my own “brain journey”. Fascinated about how the brain functions, learns and reacts I have been exploring with my own blogs and vlogs, testing and trying and challenging my brain. This is a compilation of all the blogs I have written through these past ten years about different aspects of the brain and my own reflections, in the hope that these blogs may help others to discover and comprehend themselves and in this way assists others to discover and understand themselves too. I never cease to be amazed at how amazing our brain really is.

PROVOKING AHA MOMENTS IN LANGUAGE LEARNING

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One of the greatest moments for any coach is that moment when a client suddenly out of the blue, like a lightning strike, has an AHA moment. The insight, the breakthrough, the philosopher's stone that from nowhere, suddenly becomes conscious from the depths of the unknown or subconscious.

I always say that the greatest feedback and the greatest evidence that we, as a coach, are really doing our job properly, is when we witness those continuous AHA seconds, that we have provoked through our coaching skills and expertise. And this is exactly the same for the language coach. We should be extremely skilled to constantly be provoking language insights and AHAs throughout the language learning process.

The fascinating part is that these AHA moments and creativity are very much connected to gamma brainwaves, which are classified with a frequency of 30 Hz and above and associated with heightened perception, and even complex processing ability. In 2009, John Kounios and Mark Beeman from Drexel University and Northwestern University published a paper called "The AHA Moment – The Cognitive Neuroscience of Insight". The study itself measured neural correlates with test subjects who were asked to solve problems and compared sudden comprehension, that is insights, with analytical and logical problem-solving. Various interesting findings came out of this study. Firstly, insights or AHA moments definitely correlate with sparks of gamma waves and this spark occurred one third of a second before the test subjects consciously arrived at their answer. Secondly, the spark of gamma initiated from the right hemisphere of the brain and thirdly, immediately prior to the burst of gamma waves a burst of slower, alpha-band activity of approximately 10 Hz was measured over the right occipital cortex. The conclusion from that leads to the question of whether the brain is reducing distractions and visual interference, which would then quieten the neurons in that area and allow insights and AHAs to flood in.

From this, it is fascinating to think that our greatest moments of insight occur when we quieten the brain. An interesting story about Thomas Edison, one of our greatest inventors of all time is how Edison would consciously induce moments of insight. He would do this by sitting in a chair holding heavy metallic balls and then whenever he nodded off, the balls would drop and wake him. But what Edison was inducing were those moments in time where he claimed he could develop ideas and find solutions which were not readily available to him in his normal awake state.

Serious meditators experience gamma waves. A few years ago, I had the great experience of being connected to neurofeedback under the expert hands of Thomas Feiner, the Head of the Institute for EEG Neurofeedback in Munich and we recorded my brain activity during meditation and in that meditation I experienced an extremely strong gamma wave and I recall exactly what Kounios and Beeman stated, my gamma wave rippled from the right anterior temporal lobe just above the right ear right across the cortex to the left lobe. The sensation of such a gamma wave is beyond words. Dr Joe Dispenza in his book Becoming Supernatural describes "gamma frequency

brainwaves as when the brain gets aroused from an internal event instead of an event that happens outside the body".

How does this connect to language learning? We know that the brain learns through connecting and associating information. The brain is a powerhouse of neural networks and it is constantly trying to associate new information with existing information. Since 2016 we have the evidence that when we learn a foreign language, our brain tries to connect the target language with the native grammar structures to see how the new relates with the existing knowledge of language. Once we, as language educators, fully embrace this that is when we are able to constantly and continuously steer and provoke our learner into having insights and concrete AHA moments. I have witnessed some of my learners have an instant AHA and they have GOT IT and believe me, once we GET something, we get it for life. It is almost like AHA moments instantly hardwire and that is what I am witnessing and I know that many of my neurolanguage coaches are also now witnessing.

So, the next time you witness your client or your learner having one of these precious moments you now know what is happening in the brain and the eternal question for the coach is, how can I take my client to the next AHA?

MY OWN BRAIN – A VOYAGE OF DISCOVERY

Rachel Marie Paling ©2017

The more we are discovering about the brain through neuroscience and modern technology, the more fascinating it becomes. In addition we are really blasting through "neuromyths" that we lived with in the past and we are now moving forward with what we are starting to comprehend about the brain. For example

- The brain has the ability to learn (make new neural connections) right up until the day we die
- Once brain cells are destroyed they cannot be replaced is absolutely not true
- Children can learn languages from a really tender age and not grow up confused!!
- The best age for children to learn languages is actually between 2 and 5 years of age
- People who are bilingual have more grey matter in their brain and can multitask better
- The brain possesses a performing side and a thinking side (Timothy Gallwey, The Inner Game of Tennis)
- Once the brain gains mastery of something it then goes into an automatic mode
- Learning a language is an excellent way of getting the brain to make new neural connections and pathways and potentially keeping disorders such as Alzheimer's and dementia at bay
- Stroke patients with paralysis are being encouraged to move the paralysed part of the body and continuous intention to fire brain connections is actually producing astonishing results. (Deepak Chopra and Rudolph Tanzi – Super Brain)

On a personal reflection of my own brain, I now understand what the neuroscientists say when they say that the "brain needs real and personal situations or context to relate to".

"If a student acquires new information that's unrelated to anything already stored in his brain, it's tough for the new information to get into those networks because it has no scaffolding to cling to……..Studies published in the journals Nature; Science; and Mind, Brain, and Education support this idea, and a solid amount of research also links personal relevance and emotional engagement to memory storage. "

Looking back at my own life, there have been two prominent times when I see that my brain was unable to connect or find that "scaffolding". The first time was when I was a child, possibly the age of 7 or 8 and I really had difficulty to learn how to tell the time. All the other children in my class were able to do this, but for me the whole concept of telling the time was just something that I could not grasp and did not even know where to start grasping from. My parents bought me a watch and spent long periods with me, trying to get it into my little brain, but it really took me an exceptionally long time for it to "click". I even remember having private lunch time tutoring with the deputy

head mistress in her room, going through the clock and the time with her. Clearly my brain had nothing like time-telling inside it and clearly there was nothing to relate to and without relation or sense, the brain did not “like” it. I remember at that time feeling strange that the other children could learn faster than I could and I felt that somehow I should have been able to learn as they did. But what I now know is that the situation was in fact normal. Everybody´s brain is different, every child´s brain is different and everyone learns differently – it is really up to the teachers to help the child connect and to create real and personal context for the child to grasp the new information. Nobody had explained to me that I needed to know the time, there were always bells ringing at school telling us when to go to class, when to stop, when to go to lunch etc. I was in desperate need of connecting real life to the learning, and it really took me a long time to do that.

The second time was much later in my life. As a mature student I attended the University of Sheffield to do a BA in Law and Spanish. After a bumpy first year, my brain and learning adapted and I went on to achieve a First Class Honours Degree. With legal theory I had a photographic memory and was really able to memorise and remember cases and laws. I remember in my criminal law examination I sat and wrote pages and pages answering the questions and quoting the laws and case law and the same for the Law of Trusts exams. In some of the exams I achieved 15/16 and even 16/16. At that point I was extremely grateful to my brain for such an amazing achievement of memory and ability to retrieve long term memories and working memory.

After Sheffield I went on to do a Master´s Degree and then a Legal Practice Course Postgraduate Diploma, before I finally decided to become a lawyer and went to do a two year training as a trainee lawyer.

Then the shock came. Somehow I was totally unable to connect and put into context the theoretical part of the law into the practice. For me it was like looking at life from a different dimension, where suddenly real people had real legal situations and that gap for me to connect the real with the theory was absolutely unbelievable and at times unpassable. At the time I really thought I must be the most stupid person on earth – how could I have achieved a First Class Degree in Law and be so far away from the application. Now years later, I understand what happened. And as I continue to teach adults and children I see how important it is for the educator to really understand how the brain works and to really bring in real and personal. Through my own experiences now, writing my own legal contracts in my own business I now have my own real and personal connection to those contracts that make them come alive and connected to neural pathways in my brain and the best way is learn is to actually bring the learning into real “personal doing”.

So the next time you have someone in front of you who does not seem to be able to grasp something – avoid judgement – you may have the most intelligent person in front of you, with an exceptionally high IQ who simply is not able to connect because the brain has no scaffolding to cling to and then ask yourself how you, as the neuroeducator, can bring personal relevance and emotional engagement to facilitate those brain connections and enhance memory storage. Never underestimate the person you have in front of you, always consider everyone to be their own genius with his/her own special way of learning.

LONG TREAD, LOW STEP STAIRWAY TO LANGUAGE LEARNING

Rachel Marie Paling ©2015

In London some time ago, I was training a group of experienced language teachers to become Neurolanguage coaches. Between us we all shared over 100 years of teaching experience and it really was a super group, with great interactions, observations and after three days definitely all of them were demonstrating the transition from teacher to coach. When we were talking about the neuroscience aspects of learning, I shared my description of the language learning process and how it is really like a step learning process. But not just a flight of normal steps! No! We all know those long tread steps which have a longer plateau than normal and then a short step up – those are the steps I mean! And with language learning we all know that for such a long time we feel like there is no progress and we are stuck on a long plateau, when suddenly we start to feel that we understand more, we can speak more and we generally feel a difference. But then it happens again we fall into that feeling of "nothing happening" and "no improvement" and again we find ourselves on the next plateau……feeling despondent and depressed because we feel no progress…when suddenly …up another step. And so on and so on……until we have a long tread, short rise stairway to fluency. All of the group agreed with me – I think anyone who has learnt a language would agree with me, we have all had this experience.

One of the group then asked me what I thought the reason for this "step learning process" was and on immediate reflection I did not have the answer. That evening I really thought deeply about that question. Firstly I wondered whether it was in fact only a "process" pertaining to language learning and I really asked myself how I had learnt other things in life – like playing the piano or learning to drive. My conclusion is that in everything we learn, there is potentially that long tread staircase learning process and the key to that step up and improvement really depends on our neural connections and how much we have reinforced these and also the volume of the topic to be learnt.

Whenever we learn something new, the brain is making new neural connections. When those neural connections have been reinforced enough and consolidated, they then become hardwired and my hunch is that when we have enough hardwired neural connections , these then create neural networks that gives us that consolidated learning that pushes us up the next step. Then, we continue learning more language, until again the brain has hardwired enough and created new neural networks to then take that next step up. So, in fact it would always depend on how consistent we are with the input and the consolidation (that means practice, practice, practice) and on how much we are learning in the different areas of grammar, which the brain then pieces and clusters together in such a fashion that we then make progress.

Obviously, the volume of the topic we are learning will also determine how many steps in our staircase. For example learning to ride a bicycle, probably entails only a couple of steps. Maybe we learn first with a stabilizer on the back wheel and once this is hardwired we take the next step up and take the stabilizer off and then once this is hardwired, we then have learnt to ride a bike and reached the maximum learning point. Learning a language involves a much higher volume of input and in consequence a much lengthier staircase.

EQUANIMITY AND THE NEUROLANGUAGE COACH

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For quite some time now, during my training for language teachers who take the jump to become not only language coaches but also neurolanguage coaches, I have been searching for exactly the right word that perfectly conveys the inherent state that a neurolanguage coach reaches. Many of you who have done the training with me over this last year know that I have been racking my brain and scratching my head to really bring the message across to all of you to describe exactly what I mean. You see, when you really embody that persona of a "coach" you become the perfect soundboard, the inspiration, the support, the accountability partner and you live, breathe and in fact are the neutral, non-judgemental, accompanying guide for your coachee. The coach is not there to advise, consult or tell what to do, because the coach believes in the inner wisdom and the inner power of the coachee to connect with his or her own and unique, best and appropriate way forward for that person, as we understand and deeply respect that every brain is unique.

When you add the coaching dimension to a teacher, the teacher transforms and so does the learning process. On the one hand, the confidence in the learner augments with the inherent belief in the capacity and ability of the learner and on the other hand, the self-confidence of the coach also increases; almost as if the coach starts to become inwardly quieter and more assured that the learning process will flow, adapt and naturally mould itself to that particular learner. In fact, when the educator really embodies the persona of the coach, he or she has no need to egoistically demonstrate his or her expertise nor does he or she have to constantly and incessantly be speaking and the learning process becomes less stressful for the learner and indeed, so much more respectful of the learner. We know that just one drop of cortisol totally affects the learning capacity of the brain.

When, in addition, we add the dimension of the neuroscience, and the language coach becomes a neurolanguage coach, again I would like to emphasise the developed composure and the inherent knowing which accompanies the real comprehension of how the brain learns, functions and reacts and the skilled adeptness of the fully trained neurolanguage coach to always be able to spontaneously coach the language learner through blocks, issues, negative mindset and any hindrance to learning the language, for example, triggers that set off the emotional brain into fight, flight or freeze provoking limited resources reaching the areas of the brain needed for that learning.

Ultimately, the neurolanguage coach has the quiet confidence in his or her language expertise, because all of them are already language experts in their own right and moreover the quiet confidence in the structured, brain friendly, result focused delivery of the learning process by using the neurolanguage coaching method and approach, as well as the training in the neuroscientific principles. Everything that we do as a neurolanguage coach follows the principles of neuroscience and applies these in practical steps and everything we do has its "raison d'être" in the neuroscience. For example, one of the constant adages that I use when I am training is "the person doing it learns it" and we reflect this by constantly putting on the brakes and stopping ourselves from

doing and consistently encouraging our learners to do it themselves; to think for themselves; even to create the process for themselves. In the end, one of the key factors for learning is the ownership of the learning by the learner. So, whereas the teacher is constantly jumping in, finishing off learner sentences, asking multiple questions one after another without giving the learner a chance to think, not respecting silence to facilitate thinking time and maybe even constantly telling, explaining and even creating examples for the learner, the neurolanguage coach does completely the opposite.

And finally, finally I have found the perfect word to express this inherent, innate, natural state that a fully, trained neurolanguage coach quietly assumes and acquires, wherein he or she is :

- quietly composed,
- ever-respecting the necessary thinking time of that particular learner,
- always remaining calm and undisturbed; unruffled,
- demonstrating only when absolutely necessary his or her inherent expertise in language, without the need to loudly demonstrate anything because he or she IS - what I mean is that there is no need TO DO rather it is about TO BE and to get the learner to do
- solidly present with the learner, bending and swaying but steadfast in the process,
- calmly able to explain about the brain and how to connect in and assist the learner to understand
- always bringing out the best of the learner and focusing on maximum achievement of results.

And the word is “EQUANIMOUS” - that is exactly what I was looking for to perfectly explain on my course how we strive to be and we become. Derived from the Latin aequanimitas from aequus – even or equal and animus – mind or spirit, I know that many of my coaches worldwide, and as a knock-on effect, consequently, many of their clients who are language learners, are in fact experiencing this wonderful serenity, tranquillity and evenness of mind and spirit, which in turn is greatly impacting language learning with spectacular results.

Grateful to all of you for trusting in this process and well done for the amazing results you are achieving!

OBSERVING THE BRAIN

Rachel Marie Paling ©2016

Have you ever really stopped to observe how your brain is functioning? Thinking about what thoughts you are thinking? The brain itself is normally the master feedback machine for everything in our lives, but then what gives the brain feedback about itself? And in fact the only answer is that the brain itself has to become aware of its various different parts and then remain conscious enough to be aware of what is actually happening in there at any given time. Quite a task!

If we think of the brain in its splendor, we know that the brain stem, cerebellum and midbrain or emotional brain are the parts of the brain responsible for our subconscious; all those automated programs that are buried so deep in there that we do not even need to consciously think about them, we just do them. The midbrain/emotional brain or limbic system is also our emotional central control responsible for attaching emotions to thoughts. On the other hand the neocortex is our thinking brain, the seat of our conscious brain, rationalizing, analyzing, thinking through etc.

In the case of feedback, the job would fall on the conscious brain to bring awareness to the thoughts and emotions that are coming up from the other two areas of the brain, but it really is not an easy task. Almost like taming a wild horse and bringing in enough discipline to quietly observe and even to adjust thought patterns that are repetitive or potentially producing negative effects.

Over the past years I have been trying to observe my brain as much as possible, trying to be the observer of the thoughts and emotions being evoked at any given time. I have even thought about situations that I have been able to change in my life through changing the brain and the thoughts running through when doing certain things and I am still working on changing the brain to become more efficient, more in control and more aware of subconscious programmes and thoughts that still crop up.

Let me give some examples:

Recently I decided to take a trip by car alone together with my dog. Reaching the destination would take me 15 hours depending on traffic, so I decided to divide the journey into three days of five hour drives, with stops for me and the dog and then we would find somewhere to stay for the late afternoon and evening. It was really a big thing for me as this would be the first long trip driving totally alone and also being responsible at all times for my dog. Before leaving on the trip, my brain was in overdrive with panic and fear, bringing out all possible scenarios that could be threatening and uncomfortable, in fact it felt like the part of brain that longs for security and routine was trying to talk me out of it. On the other hand part of my brain was thrilled and excited to be doing this, regarding it as something absolutely novel and unknown and with a strong feeling of wanting to embrace the unknown. So the weeks before leaving there was in fact an internal battle of debate within my brain.

Reflecting on this, it was clear that it was the subconscious and especially the emotional brain in panic and turmoil based on past events and emotions that had perhaps left memories and traces of discomfort, but the conscious brain was looking forward to the adventure and was analyzing it as an exciting potential for new.

The days that I was driving were curious for me. Driving for long stretches at a time meant that my brain was in the unconscious competence mode of driving, so not thinking about the actual driving as it is something that is an automatic programme after having driven for so many years. As I was driving I noticed that various thoughts drifted in and out of the conscious brain: so random thoughts would appear and be mulled over: maybe work, maybe people, maybe situations. Sometimes I actually put on my learn Russian DVD and got the conscious brain to work on learning Russian. It is quite interesting again to observe that the subconscious brain was the driver and the conscious brain was actively the thinker of whatever I wanted to focus it on at any given time. I have to also say that after various days driving my active random thoughts became less and less and the conscious brain seemed to quieten down more and more, losing the need to be "busy thinking about anything" and moving more into the empty mind state. Maybe from the monotony of driving for so many hours, the hyperactive mind used to the daily rhythm of extreme activity became calmer and calmer!!

One extremely interesting observation arose on one particular day and it turned out that this particular day was an all- out national holiday in the country I was driving in. Before setting out I had not given it any thought, but then when I started the journey and noticed how few cars were on the road, I realized it was a holiday. Then my brain started to panic with the words GAS and PETROL and the burning question, would petrol stations be open? I knew that I had quite a stretch on main roads but not motorways. Also, my car is a hybrid, so it actually has both an LPG gas tank as well as a petrol tank. Together they hold a lot of fuel and I had started out with a half tank of gas and full tank of petrol. As I passed by more and more closed petrol stations, recurring thoughts of emotional panic started to set in, with the emotional brain going almost into survival mode, questioning if I would arrive at my designated destination that day or not and what if I ran out of fuel and was left on the road with no emergency assistance either. Clearly the national holiday meant that everyone had decided to close and the debate of my subconscious emotional brain with my rational brain trying to calm it down, was quite an eye opener for me to comprehend. In fact the conscious brain was rationalizing and comforting the emotional brain: "It will be OK, there will be somewhere open and if not then before you run out totally we will find you somewhere to stop so that you and Arthur are safe for the evening and can move on tomorrow". The continuous debate raged on and on, and suddenly on the highway there was what appeared to be an open fuel station. I pulled in and with such gratitude thanked them for being open. In this country it is normal for the fuel stations to have people on the pumps actually distributing the fuel for you, so I profusely thanked the man and also asked if they had LPG too and to my relief they did. So we filled up both petrol and gas and Arthur and I stopped for breakfast and to regain my nerves from those panic emotions. The people there were so nice, so friendly, so helpful. I asked them if I could expect any other service stations open that day and they said it would depend where I was driving and if it was on a motorway or not. I set off from there feeling calm and back to my normal confident self of having enough fuel. This did not last though. Some hours later the weather was getting worse as I passed through mountain ranges and climbed higher into the mountains and again my emotional brain started to kick in regarding the issue of fuel and also safety.

Feeling insecure in the mountains, with more difficult roads, no towns around, no other people, fewer drivers than ever and the prospect of the evening drawing in. Even though my conscious brain knew that I did in fact have enough fuel to get me to my destination, my emotional brain was continuously doubting this and continuously nagging at my conscious brain. Nagging is the best way to describe it, almost like a nagging ache somewhere in the head, sometimes without the mind chatter but just with that ominous feeling of being heavily present. What a show, what a fight! As dusk approached, the emotional brain kicked in even more and I was curious at just how much the emotional brain reacts. I did make it safely to my destination and I DID have enough fuel and in fact MORE than enough fuel, but part of my brain had tussled all the way.

I have to say that actually accomplishing the trip of 15 hours driving there and after some days 15 hours driving back, I was extremely proud of my accomplishment. All the negative thoughts I had battled with before leaving and all the negative thoughts that arose on the driving days in one way or another taught me how to calm my brain down; how to move more and more into the now and take the journey in chunks, step by step so that at each point of the journey the brain was calm with the achievement of that particular day and gave me the feeling that I was able to cope with any situation. It was really curious for me to observe how in fact I did feel that in those days of driving I went into a survival mode state, where the most important objectives of the day were to drive and reach the destination safely; that Arthur and I were both comfortable and safe; that we had enough to eat and drink; that we were able to make our necessary stops for “health” breaks and that finally we had somewhere warm and safe to sleep every night. In a fashion, the brain had moved into basic survival mode : food, shelter, warmth, water and safety.

It is possible for us to observe our brains through the conscious mind. At the same time it is a great challenge, but when we do it I firmly believe we can in fact change situations and achieve great feats. Learning to observe may also calm the emotional midbrain enough to prevent uncontrollable reactions or spontaneous reactions of fear or rage. Asking ourselves where negative patterns and thoughts come from, also brings subconscious thought into the rational analyzing arena of the conscious mind, the neocortex, where we can think the thought through, tear it apart, reconstruct it with rationalism and calmer analysis and attempt to rewire the thought again with a more positive or different hardwiring. Now I find myself constantly in the observer´s seat; paying attention to what really is going on inside my head. I am not going to say it is easy, because it isn´t, I am still a beginner observer, but I know that little by little I am recognizing when I go into negative patterns, negative chatter, negative thoughts, also recognizing when I am focused, when I am not and little by little I am learning how to shift thoughts, combat thoughts and start new neural circuits and new hardwiring. And like everything it requires time and effort, but believe me it is worth it!

THE HIDDEN ALMOND: HOW WELL DO YOU KNOW YOUR BRAIN?

Rachel Marie Paling ©2015

The brain is a complex voyage of discovery, packed with intricate and interconnected networks of neurons, estimated to contain between 15 to 33 billion neurons. It can honestly be described as our power centre of excellence, with three main areas and various components that all function in perfect harmony and amazing precision.

Over the last 20 years, thanks to the advance of technology and machinery, we are now discovering much more about our brains and, in addition, we are definitively confirming long-standing theories that we always had believed to be true but that now can be proved with hard-core evidence. One such belief was that people who meditate regularly are calmer and now the physical proof is that the amygdala of regular meditators actually over time shrinks in size.

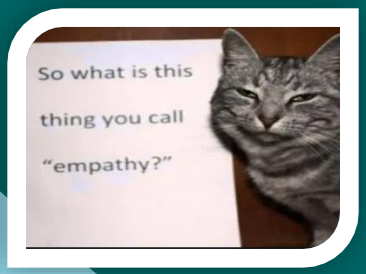
The amygdala is the hidden almond shaped mass of cells and is a part of the brain´s limbic system. It is involved in many of our emotions and motivations and is especially one of our essential survival triggers. So the amygdala is, in fact, fundamental for self preservation and mainly serves to keep us safe from threats. In ancient times, threats could range from being eaten by a lion or being attacked by other tribes, however nowadays a perceived "threat" could in fact range from feelings of unfairness to actually being under the threat of a physical attack. If the amygdala is triggered our innate responses take us into heightened alertness in which we prepare ourselves for the famous "fight or flight" mode. This response can activate physical reactions such as quickened heart beat, increase in metabolic rate, shallow breathing, increased blood flow to muscles and dilated pupils and could even lead us to adverse reactive behaviour. (Read about the Amygdala Hijack by Daniel Goleman 1996 Emotional Intelligence: Why It Can Matter More Than IQ). In addition, the two essential parts of the brain which are key for learning could become "shut off" or "closed down".

How does all this relate to language learning? Well, as a neurolanguage coach knowing how the brain likes to learn and knowing how to keep the learner´s brain in the perfect learning state is key to fast and efficient learning. The more we, as neuro-educators, understand how the brain functions, the more we can assist our learner to discover how his/her own brain likes to learn. And everybody´s brain is different – that is, no two brains are alike and throughout our lifetime our brains change through experience.

And the real key is whether the amygdala of my language learner has triggered due to a threat response. How safe does my learner feel? How confident or ashamed? How nervous or calm? And ultimately what can I do, as a neuolanguage coach, to bring my learner back into a comfortable non- threat status with positive emotions and the perfect learning state. This is the real quest for a neurolanguage coach.

Neurolanguage Coaching – Brain Friendly Language Learning – Rachel Paling
https://www.amazon.com/Neurolanguage-Coaching-Friendly-Language-Learning/dp/1910864943.

EMPATHY



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Over the past few weeks, I have had first hand experience of empathy really falling short of having the desired effect and the other evening, I was explaining to my online group of language teachers the difference between empathy and compassion from the neuroscientific perspective. One of my ladies actually asked me the question " so, can empathetic feedback in fact be ineffective?" my answer would be "yes! As a coach we have to be aware whether our feedback really has the right effect or not".

The word empathy originates from the Greek empatheia from em- + pathos feelings, emotion and even the particle path – meaning to experience, undergo or suffer. Merriam-Webster quotes the definition of empathy as

1. the action of understanding, being aware of, being sensitive to, and vicariously experiencing the feelings, thoughts, and experience of another of either the past or present without having the feelings, thoughts, and experience fully communicated in an objectively explicit manner also : the capacity for this

2. the imaginative projection of a subjective state into an object so that the object appears to be infused with it

Let us compare empathy with sympathy - (and the word sympathy is one of the most frequent false friends for English language learners as the brain automatically thinks it refers to the stem sympatic- denoting friendliness in many, many languages, but NOT in English!). Sympathy really means having the capacity to share the feelings of another, whereas empathy is about imagining feelings that we do not actually have.

Personally, I do think there is a lot of confusion between sympathy and empathy and as a coach or language coach we have to be very clear which is which and we have to be very conscious whether our empathetic or sympathetic comments really are helpful for our client.

Let me share with you an experience that I've had over the last few weeks. About two weeks ago I lost my purse. Three people responded, when I told them what happened, with their own stories of when it had happened to them. Honestly, in my moments of despair, their stories really did not help me. In fact, I didn't feel they were being sympathetic or even empathetic, it was almost like they had ignored my situation and pain just to launch into their own painful experience. This is a classic example where maybe we try to be sympathetic by sharing our own experience, but we lose sight of the present moment.

Another very good example, for me, was when I did my very first coaching assessment and Rachel Bamber PCC was my assessor. I had to coach Rachel around a dilemma that she had. When she shared her dilemma, I replied "I know how you feel, I find that I also have the same problem". When it came to the feedback, Rachel asked me what I thought that comment had provoked in her and I replied that my intention was to show empathy. However, she actually had thought "Oh dear, if she has the same problem how is she going to coach me around this!". I will never forget this as a very powerful example confusing sympathy with empathy and perhaps we could say that as

a coach sympathy is dangerous. And one of the most dangerous things when we are talking with somebody who has a problem, who is really depressed or having a bad time, one of the worst things we can do is to say “oh, I feel the same…… I have the same problem…….oh, that happened to me …… that’s exactly how I feel”. This does not help the person who is suffering as he or she does not feel recognised in what they are experiencing nor does it offer any help or solution. It totally deflects and diverts the conversation.

The expert coach, in my opinion, does not bring in comments relating to own experience. Instead the expert coach will deeply listen, acknowledge and fully recognise what that coachee is experienceing and feeling. In effect, the coach is holding the space for that person to express their situation, their troubles, their pain offering no judgements, no opinions and no comparing parallels from the coach’s life. I will never forget some years ago doing a coaching practice with one of my amazing Neurolanguage coaches, who shared with me that she had a problem with her neighbours, who were constantly parking in front of her garage and blocking her, preventing her from freely coming and going as she pleased. Throughout the whole conversation, I clearly remember my whole being was fired up because at that particular moment in time I was also experiencing the same with one of my neighbours and believe me it was frustrating and annoying to each day waste time finding the neighbour and politely asking him to remove his vehicle! Not once when I was coaching did I mention that I shared her problem, I remained neutral, non-judgemental, non-opinionated and never once reflected my inner feelings because I knew that it would not help her in this situation, which was her situation, her reality, her dilemma and I was there to be her sounding board and coach her towards her own solution.

This is when as a coach we shift from empathy to compassion. Compassion in fact means to understand the pain of another person and to want to mitigate that pain. In other words, it is where the coach recognises and acknowledges the pain of another, but swiftly moves the conversation into action and solution. For example, “I am so sorry to hear that you have lost your purse, now what are the steps you’re going to take to remedy this loss?”

The fascinating thing is what happens to the brain when we feel empathy and what happens when we feel compassion because in fact neuroscience demonstrates how the brain reacts differently to both. Tania Singer is the director of the Department of social neuroscience at the Max Planck Institute for human cognitive and brain sciences in Leipzig and she clearly explains the differences. With empathy, mirror neurons trigger and in fact the pain and reward circuits of the brain light up. “I feel what you feel”. However, with compassion the areas related to love, the Periaqueductal grey which triggers the vagus nerve, light up. “I recognise and acknowledge what you are feeling, but I want to help you move on from this”.

How does this relate to language learning? So many times, our learners say to us, “oh my pronunciation is terrible, I’m never going to learn this language” etc etc. As a language coach, we have to ask ourselves how effective is it to reply “no, your pronunciation is fine, you are doing really well, I really don’t think that. In my opinion you are making great progress……” Because in fact no matter how many times we say this, how our learner is feeling will not change. It may make them feel momentarily better, but it does not recognise and acknowledge their real feelings. The best approach is to fully acknowledge and then to blast into compassion. The best reply would be “thank you for sharing your feelings with me and I’m really sensing that this is something that is troubling you. So, what can we do to help you feel better about your pronunciation? What strategies can we now introduce to really combat these feelings relating to pronunciation?”

And this continuous recognition and acknowledgement and desire to push people into finding their own way forward should be the constant mission of the expert Neurolanguage Coach.

WRITING MY BOOK

Rachel Marie Paling ©2019

Yesterday, I received an email from Maria in Argentina and I'm extremely grateful to her for sending me feedback about my book. She wrote "it is amazing. I started reading it and I find great concepts and content." And I have to say over the last year I am so grateful to receive such wonderful feedback relating to my book and may I add that I never cease being surprised! In fact, every time I get positive feedback, it reminds me of what I went through when I wrote the book. At the beginning of the summer of 2016, I was determined to write the book.

I was extremely busy at that time, most days working 14 hour days, but still I was determined that somehow I was going to get that book written. Somebody gave me the tip relating to dictation software, so I purchased it. The next step I took was to clear a full seven-day week towards the end of August, blocking my diary and setting the clear intention that in that week I would write and complete the book. I told my friends and family what I would like to do and most of them looked at me in disbelief, half listening even sceptical and in addition, it was a miserable German summer, June and July I remember, were particularly awful weather months that year. At last, my designated week arrived and suddenly the weather changed, the summer came and the heat began, it was glorious.

I started the process of dictating the book and the book flowed from my spoken voice, which I then had to check and correct constantly as I was going. Interestingly, at a later date, I asked for some feedback from my big brother about the book and his first comment was "it really read just like you speak" :-) - yes it does, because that's exactly how the book came alive. Now coming back to that week in August, I clearly remember drifting into some strange brain state and for those who have done my courses or for those who have been on my webinars, you will know that I am fascinated by brainwaves and in particular by alpha and theta brainwaves, which are the relaxed, meditative brain states where creativity and the flow state are harnessed. I can only describe my brain state that week as being "in some sort of creative flow". Every single moment of those days I was streaming with book thoughts and even when I took brain breaks - I went for walks in the forest, I sunbathed, I researched, I visited the open-air swimming pool - still each and every moment when I was not talking and dictating and I was not correcting and writing, my brain was constantly in the book asking myself "what have I just been writing, where am I going next, what is the message I want to bring across, do I need to change anything,".

It was as if suddenly the book and my brain had become a constant, unified creation. It was a wonderful week and on day seven, the book was complete. The first draft had been written. My friends and family were amazed and if I'm honest, even I was amazed. However, nothing had prepared me for the next steps of the process - the elation of finishing the draft, slipped into seven months of writer's hell, with incessant questions, insecurity to really publish, constant amendments and corrections and the fear to really leap and launch this book. Luckily, I was supported by the most amazing publisher who provided me with a phenomenal proofreader and I am eternally

grateful to her for pummelling and massaging the book together with me into that final version that you are all receiving today. I will never forget her emails full of suggested amendments, which always started with “now Rachel go and make yourself a nice cup of tea and then sit yourself down…….”.

Finally in March 2017, the book became publicly available and I’m extremely grateful to all of you who have purchased the printed version or the Kindle version and grateful for all the positive feedback that I have received. It certainly was an impacting experience for me and it is now fascinating to look back on that flow state week and to really recognise and try to understand how each and every one of us can harness and promote creativity, pushing the brain into states and achievement that we ourselves do not believe that we are capable of.

As I have written in the introduction of this book, “I do hope to inspire you to initiate a deeper comprehension of how your own brain works to then transmit this information to your learner, giving you more insight into how to continually encourage, motivate and empower him or her” and I do hope that with this blog I can inspire you all to tap into your unique creativity and find your own personal flow state to create and produce any work that you put your heart into and want to see produced, made, published, or simply put into form and brought into life.

THE NEUROLANGUAGE COACHING™ LEARNING SPIRAL – PROGRESS MODEL®

Rachel Marie Paling ©2015

Have you noticed how the spiral is omnipresent in our lives? Galaxies, DNA, geometry, the golden ratio, the fibronacci, shells, tornados to name just a few.

With Neurolanguage Coaching™ we are also introducing a learning spiral. The whole process is orientated around cycles, but cycles that start from one point, go round but then move forward to a point in front. So, in fact to be more explicit, the process involves initiating from a diagnostics which leads to a goal setting process. The goals are set by the coachee and then a realistic time period in which to achieve those goals is also determined. Then the learning process begins.

The goals are worked on during that given time period and once this period comes to an end a goal review is held to check on the coachee´s progress. If the coachee feels that the goals have been reached then new goals are then set and the whole process continues again and so on and so on. In fact, the process reflects the movement of a spiral, as the coachee never comes back to the same point if the goals have been achieved, he /she will always come to a point further down the line.

If the goals have not been achieved then the movement forward is less but nevertheless there is a movement forward, there is always some advancement. And in this way “spiral learning” takes place. This is reaffirmed by the PROGRESS model ® which explains clearly this spiral learning process and which is taught to all neurolanguage coaches, so that they fully understand the nature and structure of neurolanguage coaching engagements

7 TIPS FOR KEEPING THOSE „LANGUAGE NEURAL NETWORKS“ POLISHED

Rachel Marie Paling ©2017

I am constantly observing my brain when I am speaking the different languages I speak, and this past weekend was a really curious situation for me. I was back in Spain, in the place I used to live between the years 1983 and 1995, so I was tripping in and out of Spanish and Catalan. I had a friend over from Italy and also my parents (English) and business partner from Germany was there (English native, but her partner is German). So, my brain had the perfect opportunity to be constantly pushed and trip from English, to Italian, to Spanish, to German, to Catalan. Absolutely fascinating! It normally is instantaneous for me to switch from language to language and I would say 70% of the time my brain was doing just fine. But that 30% of the time was interesting. These were the moments, when I would speak in Spanish to my Italian friend or in Italian to the Spanish. And when it dawned on me, I would stop speaking. Say aloud laughing “Sorry, one second I just need to change the chip to the Italian chip or to the Spanish chip!” and once I had brought my focus into the language needed at that time, it was almost like a quick reset I was then able to go on in that language. Now and then I also noticed when I was getting tired (or, may I confess - when I had a little too many drinks), my brain was in fact mixing the languages more and it was always more noticeable with Italian and Spanish as the two languages are so, so similar.

Interestingly I was also thinking over the weekend about the importance of keeping languages going once we have got to that “mastery level” of the language. When I left Spain in 1995, I was in fact absolutely bilingual. I moved there when I was 17 and totally immersed myself in Spanish during 12 years and although I was teaching English, I was integrated with my “Spanish family” and out of work rarely spoke English. I even did 3 years of Spanish University, all in written Spanish. I remember clearly when I left, a girlfriend said to me “You will lose your Spanish now” and that really made me think at that time that I would. Now years later, I can still roll into Spanish and feel like it is my own language. It does not take me long to get back into it. What I do notice though, is that some words that I have not pronounced in a long time, my brain knows the word, quickly gets it out but my “pronunciation” mechanisms (mouth, teeth, tongue) struggle to get the word out. Maybe because it has been so long since I had actually voiced that word! So, the first time I resay it, it comes out rather clumsily. But then the second time, it starts to be natural and it only needs, a couple of times to get the mouth, tongue, positioning etc back remembering it again.

So, my observation is that in all these 20 years that I have not lived in Spain, I still have a great command of the language and during these 20 years away, I have had constant contact with the language, speaking with friends and sometimes revisiting Spain and working with Spanish people learning English, but nevertheless I now recognize the importance of keeping our “language neural networks” polished all the time. Frequent exposure to the language is better to keep those networks alive and functioning.

I am sensing this also with my Italian. Between 2004 and 2014, I was frequently in Italy and now I am noticing that I am not so exposed to the language as I was back then, so I know I must make some more conscious effort to keep speaking and keep my Italian neural networks buzzing and vibrant.

And all in all, I absolutely enjoy tripping in and out different languages. I love flexing my brain networks, with the constant switching. It is almost like doing a brain "workout". I am also getting hungry to learn more again and having played with a little Arabic, Russian and Chinese over the years, I am keen to now get my teeth into one or two of these and really come into mastering new languages. You know the neuroscientists actually say that learning a language is one of the best activities we can do for the brain to keep the brain "supple, flexed and exercised" and it is especially recommended for more mature people to learn a language.

So, if you learnt a language at some point in your life, here are some tips to retrieve your stored data in the brain and get back into that language. Your brain may actually surprise you and you may find that you start to reignite those dormant networks faster than you ever thought.

1. Immerse yourself into the language as much as possible. Surround yourself with vocabulary as triggers to remind you of it.

2. Read in that language, maybe change from your native internet into internet in that language just to trigger seeing the language again.

3. Switch TV or films into that language, even if you are passively hearing the language, your subconscious is always paying attention and is reactivating those neural networks. Be aware that your subconscious is always

4. listening, even if you are not consciously listening!!

5. Call old friends or acquaintances with whom you used to chat in that language and could chat again to catch up. Even if you start speaking slowly, be patient with yourselves, and allow yourselves the time and the space to retrieve the language and get it going more and more. It is really important to get the passive listening and reading into spoken and voiced language.

6. Go and visit the country. Plan little trips to get to rub shoulders with the natives. When you are there, play with the language and give yourself little missions to go and do – like asking for tourist information or engaging in small talk with someone.

7. Get curious about just how quickly you can get your brain back into the language. Never underestimate the speed of your brain. Remember there is a part of the brain called the Basal Ganglia which, for some people actually kicks in recognizing routines/repetitions just after three times, creating the potential for a long-term habit. So, believe in the potential of your brain to create habits and automatic programmes, it is in fact the most amazing "computer".

8. And, of course, get in touch with a Neurolanguage Coach, who can quickly connect you back in, as we believe in provoking those neural connections wherever possible, getting you to think and learn for yourself and getting you quickly and efficiently into normalizing that language in your brain. I always think that a Neurolanguage Coach motivates and facilitates, transferring knowledge whenever needed and assisting to correct and consolidate language already known. As the brain learns though association and repetition, we are constantly aware of how to provoke – I always say that we are "provocateurs par excellence".

Our brain is the most intriguing mystery of our lives! Having an estimated 86 billion neurons and multiple neural connections, from research released this month June 2017 from the Blue Brain Project in Switzerland, we have now discovered that the brain is full of multi-dimensional geometrical structures which processes in up to 11 dimensions! The research found that groups of neurons connect into "cliques" and depending on how many neurons there are in one clique, the size of the clique would determine the dimensional geometric object, which could in fact be a "high-dimensional geometric object". So, if you have learnt a language, just imagine the intricacies of the "clique of neurons" and the multi-dimensional geometric depth of this clique, potentially 11 dimensions 😊!

Awesome brains! We have to remember at all times, that we all have our own unique awesome brain!

HOW NEUROLANGUAGE COACHES GO BEYOND LANGUAGE AND REALLY HELP PEOPLE IN A "PANICKED BRAIN STATE" ANYTIME AND ANYPLACE

Rachel Marie Paling ©2017

I am noticing more and more just how sensitized I am to other people´s reactions. As I now understand what happens to the brain when people overreact, whether in rage or tears or hysterical laughter (amygdala hijack) or when people are in panic, it is almost as if I have developed a sixth sense for people in "a state". And I know that all the teachers who have trained with me are also becoming more and more sensitized and in this way, whether we are coaching in our jobs or not, we are in fact able to really help other people who need shifting from the panic state into "normal rational" brain state.

In fact, last weekend I saw just how much we can help. Last year, I went to Barcelona Airport to pick up a friend who was visiting me for the weekend. I parked my hire car and walked into the terminal and, as it had been this friend´s birthday recently, I started to have a look in some of the terminal shops for a present. As I was walking past one shop, a little old lady was sitting on the display area, staring into the distance like a startled rabbit. Just looking at her, it was as if I could sense that she was in a "full fight or flight" panic state. I immediately stopped and asked her if she was OK in English. She started saying in broken English

"No, ticket lost, no money, fly now Stockholm, no ticket".

I crouched down to her level and looked her squarely and calmly in the eye and asked her

"What is your language?"

"Russian, Swedish, I live in Stockholm".

"Do you understand me in English?"

"Yes, some English."

"OK. Stay calm. Breath. No money – you lost money?"

I spoke with her firmly in pigeon English to simplify the language and try to understand how I could help. I could not understand if they had stolen her money, but I understood she had to fly to Stockholm and she could not find her ticket, but she had her passport and her visa card. I quickly took her up to departures and looked what time the Stockholm flight was, boarding was in 40 minutes. I raced her to Vueling information desk and spoke to them in Spanish. They told me that she had already been there and tried to buy a ticket, but her VISA card was not working. Firmly I said she had a ticket already and had lost it and could they not look and try to buy her a new

ticket. At that moment, the girl behind the counter clicked (and Lord knows why she had not clicked before when the old lady had already been there before!) and realized that if she could find the booking of the lost flight ticket, she could print out the boarding pass. She quickly found the old lady´s reservation and told us to go quickly to the Vueling last minute desk to get the boarding pass and she also ordered airport wheelchair assistance to get the old lady to the gate. At that point, we were racing against time and the old lady was getting more and more nervous and I kept telling her "Stay calm, you will get the plane, breath, breath, focus, look at me, breath." We raced to get the boarding pass, the old lady hanging onto me for dear life, we picked it up and then waited nervously for the wheelchair. I kept saying to her "Calm, breath" and slowly she started to get calmer. While we were waiting, one ground staff from Vueling came to tell us that "we could not wait there". Very firmly and in perfect Spanish I told them that we had been told to wait there by another ground staff, so we were not going to move and we were waiting for the wheelchair. Just imagine that this old lady had been waiting there alone and someone suddenly comes over to shout at her in another language which she could not understand, telling her "Not to do something which someone else told her to do!" It really shows how speaking the language gives the opportunity to defend oneself and explain firmly, calmly and in an assertive manner!

The wheelchair came with an extremely slow, phlegmatic lad pushing it. Again in Spanish, I said, "I think you need to go faster and get this lady to the plane….." "Why?" was his immediate retort! Hardly containing my anger I replied in Spanish "Because the plane is leaving in 30 minutes and she has to board it….."

The old lady had tears in her eyes and was thanking me and I left watching her being taken to security. I could only hope that the airport staff would get her on the plane and that she was able to then fully calm down and get her "emotional brain" back into a calm normalized state again.

The whole episode has really made me think:

1) Neurolanguage Coaches, who have trained with me and my approach, all have the adequate training to understand brain reactions and all of them are able to assist and help anyone, anywhere who is having a "limbic panic reaction". I know that some of my coaches even use their knowledge and techniques with their children. One was recently telling me that she has just moved to Japan from Belgium and her little boy was having panic reactions to the move and she calmly explained to him about the brain and what happens and this has greatly helped her little boy to observe himself and understand, feel calmer and adapt to such a big change in his little life.

2) I strongly encourage all my Neurolanguage Coaches, to always be alert and sensitive to people who are having that "brain" reaction and be ready to help anyone, anywhere – not only when we are working as Neurolanguage Coaches, but also in our daily lives.

3) I strongly recommend that airports should have a special service with sensitized and specially trained staff to help in particular older people and lost children to move out of their panic state into calm and rational. These staff should receive special training on how the brain reacts, so that they are extremely aware and able to handle these situations better, instead of shouting and thinking that if they speak louder, then people will understand them! If someone is in panic, the louder you shout the more you push them into panic!

4) I strongly recommend companies to understand that, when it comes to training staff, they should use "neuroeducators" who are able to sense when learners are focused and attentive or when the learner is "shut down" to really ensure that the company is getting a training that is producing business impact and efficiency.

5) I strongly recommend to everyone – understand your own brains more, understand your own reactions. By understanding ourselves, we can then understand others and how they react and ultimately, we can move into focused solutions and spring-board away from panic. And in light of the situation in the world today, where we are all being constantly pushed into "permanent alert and living on the edge", it would be amazing to think that no matter where, no matter when, we are all able to help one another and in particular help each other to remain calm and with a "normalized" brain state at all times.

HOW A SINGLE DOSE OF CORTISOL CAN DISRUPT THE LEARNING PROCESS

Rachel Marie Paling ©2017

One of the major messages that I bring across in my courses training teachers worldwide is "if our learner is suffering from stress, social pain or in fight or flight mode, he/she will not be in the right state to learn anything!"

And as trainers, teachers, coaches and /or educators it is I essential for us to really know and understand this! In the end, we are there to help them learn and ensure that learning, otherwise what is the point! However, all too often, we are not aware enough of what is happening to our learner. Even a directive order like "say that again" or "say that in a different way" could have a direct impact on a learner, arousing their threat response and pushing them into an adverse reaction and fight or flight mode. I know this from first-hand experience when I was taking some Russian lessons some years ago and the teacher told me to "record my conversation and then listen to it when I was walking". This provoked in m one of my "rachel gut reactions" where I immediately retorted "no way". I think the teacher was shocked by my response and I quickly explained to her that actually I really hated walking down the street listening to things and besides at the point of my life as a busy entrepreneur I really never was walking down the street, I was normally hectically running around and driving from client to client. Now when I look back it was not only the fact that the teacher had told me to do something totally contrary to my nature, but also the fact that she had "ORDERED" me to do it and as an extremely independent character I really do not respond well to orders. Now as a coach, I understand that independent learners actually need to be "requested" or asked though permission questions for them to really respond in the right way. So in fact it is always better to coat your order with permission – "may I ask you to…." "Rachel, how about we record this conversation and may I ask you then to listen to it now and then whenever you get a moment? – now that would have sounded like silk in my ears ☺

It is fascinating to understand just how much cortisol (one of the stress chemicals) absolutely affects the learning process. Proud to say that one of the universities I studied at, "Ruhr University Bochum (RUB)" in Germany, last January released results relating to this. Dr Hubert Dinse stated how

"Previous research has already shown that stress can prevent the retrieval of memories. But now we have discovered that it also has a major effect on our perception and perceptual learning"

And cognitive psychologist Prof Dr Oliver T. Wolf explains:

"Our data show that a single dose of cortisol not only disrupts memory in the hippocampus, but it also has a substantial effect on the plasticity of sensory areas of the brain"

Also In previous studies, neuroscientists have demonstrated that cortisol suppresses the strengthening of synaptic connections. So, the plasticity of the brain is affected and therefore its ability to learn.

In practical terms, this means that educators should be constantly aware of how stressed our learners are and especially when learning languages. Language learning has to be one of those topics that can instantly trigger the fight or flight response. I have seen confident top executives visibly shaking when they have to deliver a presentation in English. In fact, in one presentation, one lady stood up, went to the lectern to present, started to speak and the next minute she had passed out on the floor. Now that was a really extreme “limbic reaction”! And in fact, all of us can relate to these moments, we have all had “panic moments” or “extreme reactions” and we will surely still have them at some point in our lives. Once we truly can understand what is happening to us in those moments, what is happening to the brain, how our survival mechanisms are responding, then we can develop mechanism to “help” us get through them. And perhaps one of the most important things to understand about the brain is that “the brain loves habit”. The more we do something, the more it becomes a habit, the more it becomes an automatic subconscious programme for the brain and the quieter the brain becomes. It really is true that the best in life is “to walk with our fears” – the more we walk with them the more we surpass the fear to the familiar. So if you have language learner who is really suffers from the physical reactions to speaking language or the mental fear of speaking, might I suggest that speaking with them about the brain, the limbic system, the survival fight or flight modus and then explaining how the more we do something the more it becomes second nature and normalized by the brain.

Practise makes perfect they say – but in addition practice forges new pathways and new pathways create new habits and habits make the subconscious.

NEUROLANGUAGE COACHING, IAEFL BESIG CONFERENCE MALTA THIS WEEKEND, DAN BROWN AND AI IN LANGUAGE LEARNING

Rachel Marie Paling ©2017

I am delighted to be a part of the IATEFL BESIG Conference in Malta this weekend. The Annual Conference promises to be an incredible experience with professionals from the English Language for Business Training arena coming together to share and discuss expertise. I am honoured to be speaking on Sunday morning at 11.00am about Neurolanguage Coaching and Business. So, what does this have to do with Dan Brown, you may be asking. Well, interestingly, when I was preparing my presentation a few weeks ago, I was gripped into Dan Brown´s new book ORIGIN and fascinated by the whole plot which revolved around two vital questions: where do we come from as a human species and where are we going? These questions kept resonating in my mind together with the intriguing topic of AI – Automated Intelligence. What most of us think to be something of the future, is in fact a reality now. And in fact, when we think of the language learning world, we can really observe how automation is taking over. Mobile apps, robots for learning, mechanical online learning platforms and even simultaneous translation ear pieces are all becoming the rage for learning or instantly speaking languages. We are in a period of modern technology replacing human delivery, but in fact I do believe that the human dimension in learning is absolutely irreplaceable. Technology versus the Brain – that is the question!

Ultimately, we know from neuroscience that we are wired up to be social. Matt D. Lieberman is a neuroscientist who has profoundly studied the “social” aspect and need that we all have to be social. Just this morning before taking the plane to Malta, I was also reading an article about Super Agers – people of 80 and above who are just as sharp in their brain as people 30 or 40 years younger than they are. One of the key factors contributing to this appears to be that these Super Agers have deep and meaningful social relationships, and this greatly impacts the “prolonged sharpness” of the brain. We also know that the more real and personal the learning process is, the more effective the learning is – so in my humble estimation “real and personal” is not achieved through mechanical means or technology and the human dimension in learning is and always will be the most effective way that we, as social beings learn.

Now, coming back to Dan Brown´s questions, I did in fact decide to use these questions as the backdrop for my presentation on Sunday morning, connecting it to the language learning and training world. Who are we as language educators? Where do we come from? And where are we now? And most importantly where are we going? Essential questions which I think we should all be deeply considering, especially in this ever-changing, constantly globalizing world that we all live in. Languages are no longer a luxury in life or in business. Languages are ESSENTIAL. And how do we as educators really consider how to help our learners to come into the language in a faster and more efficient manner? How do we get our executive clients to normalize the use of a foreign language in their operational day to day work? Only this week I was working closely with a top executive who is a

tax adviser in his own language, who greatly needs to have the ability to communicate perfectly and precisely regarding tax issues in English. His level is really excellent, however he personally feels he is not yet comfortable explaining such detailed issues and we are now working on goals and strategies to really get him more comfortable and his brain more “normalized” in English.

And finally, as I wrote above, I do believe that the key is the brain and knowing more and more about how we function, how we react and how we learn (and we are all different). This knowledge, together with the human aspect of learning together with a coach or a trainer is the ideal scenario for learning and complemented by the modern technology available to us today. Please do not get me wrong, I am not saying we should not use modern technology, what I am saying is that the human element should come first and technology should support and accompany that humanized process. As a species, and returning to Dan Brown´s book, we may find ourselves endangered by AI. So, respecting and honouring our human aspect should ensure our future not only as language educators but also potentially as a species.

What do you think?

LEARNERS OF TODAY

Rachel Marie Paling ©2017

I and many professional educators have been saying for quite some time now that the learners of today have changed. I remember Joanne sharing with me last year how the teachers at a University in Canada had their “head in their hands” trying to understand how to help the learners and Interestingly I was reading a report yesterday which echoed what we are all thinking . The revealing adjectives to describe our learners of todays were :

Distracted

Impatient

Stressed

And it made me think of all the stress chemicals inundating our learner´s brains. No wonder the information is not sticking! We have known for a long lone time how the fight or flight status can affect us and even how post traumatic stress disorder (Bessel Van der Kolk The Body Keeps the Score) can affect learning. We even had research in January 2017 from my old university Ruhr Universität Bochum that just one drop of cortisol affects the brain´s plasticity and affects the functioning of the hippocampus.

Now I have also been saying for a long time, that I am witnessing a global phenomena of highly experienced and/or highly sensitive educators shifting the way they are teaching to adapt and alter their teaching delivery to be able to really reach the learners of today. Definitely, the teachers who are taking my Neurolanguage Coaching course are this type of sensitive, highly intuitive educators who really want to not only make the change but also Be the change.

Bearing in mind that our learners are distracted, impatient and stressed. How can we in broader terms really assist as educators?

Distracted is an interesting word. I am not sure if I would really say distracted, but in fact we have busy brains. Technology is keeping our brains constantly connected and overly busy. Many learners come to our sessions with phones switched on and emails pinging throughout the learning. The major battle for the educator is to win the learner´s brain´s attention, because without that attention it is highly likely that the learning will not stick. I always think that we have to remind our learners about the cost effectiveness of our sessions. Either they or their ompany is paying for the session, so the question for both coach and coachee is always how can we make this session more cost effective? What can we do to maximise the learning in this one hour we have together ? When the educator creates the right atmosphere and we really get the learner into a, what I call, “perfect learning state” then there can be instant aha moments where connections are being instantly made and that information may be imprinted into the brain´s memory banks quickly.

Impatient – oh yes. We live in a world where we all want everything to be like our communicative technology of today. Instant and instant fixes. From the neuroscience we know the brain learns through repetition and the creation of new pathways which consolidate and reinforce over time, but we also now have research talking about extrinsic and intrinsic learning. The former learning by slogging and using the rational brain and the latter learning by doing and utilizing the subconscious part of the brain.

HOW CONSCIOUS ARE YOU OF YOUR SUBCONSCIOUS?

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I am always fascinated by the interaction between the conscious and the subconscious brain. Fascinated when learning a language, how when we get the learner into a "flow" state, which I call the "perfect learning state" with the "alpha" and "low beta" brainwaves interplaying and the non--aroused limbic system allowing the free flow of thought/recall through the hippo-campus and pre-frontal cortex and the learner in a positive frame of mind with the right "chemicals" being produced, namely oxytocin, dopamine and serotonin. And I am always reminded of Timothy Gallwey in his book The Inner Game of Tennis and his wonderful denominations of "thinking brain" and performing brain"; the conscious brain and subconscious brain respectively. And we know that often when we are performing "skill activities", which are embedded in the subconscious brain - meaning we have practiced and performed the skill enough for it to be an automatic programme - as soon as we start to "think through" that activity, we find to our horror it actually becomes harder to do it. So, in fact, if we shift into the thinking brain and think it through step by step, the whole activity goes to "pot".

Fascinated by this interplay, I have been observing my own thinking and performing brain and testing out what happens when I start to shift from one to the other. Some months ago, while swimming, I started to observe when and how I was performing "breaststroke", so when exactly did my arms move forwards and outwards and my legs forwards and outwards and as soon as I started to question the timing and observe the actions, I started to lose the rhythm completely and was more and more out of sync. Another example was in Zumba. I am constantly fascinated how people just come into a Zumba class and just do it. As a trained dancer, I was always used to being shown and taught slowly each dance move and how to piece steps together into a routine. In Zumba, they do nothing of the sort. You arrive and you just have to "do it", as no-one shows you and you just have to pick it up somehow. Amazingly when I see new people coming in, somehow, they muddle through and they DO in fact DO IT! And equally amazingly is that when I stop thinking and just do it, it flows naturally, but when I start to think what is coming next and where/how to move then I lose the flow.

Even more interestingly is when I am with my boxing trainer. Most weeks I am with my trainer and we practice punch combinations with me punching his flat gloves in varied, fast combinations. It is fascinating to notice that when he tells me the combination he wants, my brain gets it really quite quickly, so he can tell me "jab – jab – hook – uppercut" and I instantly register it and do it. Normally we repeat the sequence various times, always trying to be faster and stronger with the punch. When my brain is free from interference, the punches flow naturally and quickly and I come into a consistent rhythm. The fascinating thing is when my mind starts to get interference from my "mind chatter", for example I start to think about work or things that have happened and my thinking brain distracts me away from the punches. Immediately my timing starts to slow down; my punches go to pot and concentration starts to fail. Honestly it is amazing, how the distracting brain slows down and even blocks the flow from the performing brain. My trainer always knows when I am "clouding" over because it is so

obvious in my flailing performance and I have to immediately shake myself back into concentration, block out those interfering thoughts and get back into the punches fast, otherwise I find my trainer´s glove in my face! And this leads me to my next question? What is in fact concentration? Actually, from my boxing example, does concentration mean focused attention on the task at hand, allowing the performing brain to flow naturally and without distractions? How can we match the thinking brain and performing brain theory with the "distracting thought intereference" ?

Considering this, I do believe it strongly depends on "what" we are doing at the time.

1) Learning something totally new – means that we have to concentrate fully on the new information and that means the conscious thinking brain/working memory has to be absolutely engaged. We have to do enough repetitions of the new to embed it deeper. Theoretically, the focus here is more on the thinking than the performing as we do not know it well enough to "just perform" and we have to fully concentrate on the new input.

2) Something new, but similar/same as previously done. With training we learn "different aspects" of an activity. Take tennis, dance or boxing for example. There are various moves and combinations, which we train and prepare our brain to "react". So, looking at Zumba. How come people arrive and just "do it"? Well I do believe that if the activity is similar to something we have done before, the brain starts to relate to what it knows and then applies prior knowledge to the new task at hand, so in fact we have an interplay of "thinking" plus "past performing". Concentration here means "not allowing the distractions, so that the subconscious can apply the similar or the previously learnt and just getting on with the performance".

3) Performing without thinking – that mastery state, where we perform and we mostly we perform with the thinking brain actually "thinking" about something else! In this case the activity is so deeply engrained that it is becomes "automatic" and seemingly we lose all "concentration". The danger here is that it becomes so automated that we lose awareness and this may lead to "glitches". Over the years I have coached some technicians from an Electricity Grid company and we have often talked about the fact that some of the fatal accidents repairing the grid or transmission stations have probably occurred because the technicians were operating in such an automatic mode that they did not take enough care and ended up losing their lives. Pilots also have to regularly go through the simulator to ensure that they refresh their "subconscious training" and re-stimulate their reaction senses. So, could it be good to actually, now and then, bring consciousness and awareness into our subconscious programmes to ensure that those programmes are running without glitches?

What about language learning? Interestingly I believe we do go through all stages 1, 2, and 3, but in a spiral build-up of the language. When we start to learn from scratch (1), we need to use the thinking brain and concentrate on the new information. However, I strongly believe that if we can help the learner to connect to already known native language structures and vocabulary, then we can bring in some "previous knowledge" (2) to assist the learning process. An interplay between (1) and (2) will ensure a faster learning effect. This has in fact been beautifully justified in the research 2016 of Kirsten Weber, Morten H. Christiansen, Karl Magnus Petersson, Peter Indefrey, and Peter Hagoort. fMRI Syntactic and Lexical Repetition Effects Reveal the Initial Stages of Learning a New Language. Journal of Neuroscience, June 2016 DOI: 10.1523/JNEUROSCI.3180-15.2016. In this research, it has been shown that it helps the brain "if it can reuse characteristics of our mother tongue when learning a new language".

Once a learner consolidates the new information, assisted by bridging with native language structures and connections, this goes more and more into long term memory and mastery (3), but then we add more language, new areas, new tenses, new vocabulary and in this way we are continuously building and building the language knowledge. Quite intriguing how the brain step by step gets deeper and deeper into the language the more we expose the brain to the language.

In my next blogs I will be commenting more on this “connecting native and target” wherever possible as I know it is quite a polemic topic.

And I welcome your thoughts on the subconscious and conscious interaction throughout the learning process. 😊

HOW SHORT IS YOUR FUSE? EMOTIONAL BRAIN ON "CRITICAL"

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Over the past months I have been observing our "collective brains". The more I go deeper into the understanding of how my own brain functions and reacts, the more I am noticing and appreciating how others are functioning and reacting. Our brains are amazingly wired up with an instinctive primitive inbuilt "alarm system" - if I may express it in such simplistic terms - which actually endeavours to keep each and every one of us "safe" and to "survive". Obviously in times of danger, this mechanism triggers us into action, into fight or flight, with the right amount of stress chemicals, for example, adrenaline and cortisol, to spur us to react. Fascinatingly, the amygdala receives signals" even before they hit the conscious thinking brain. I personally can distinctively remember one such moment in my life, when I was driving at full speed onto a German motorway, where in some places there are in fact no speed limits set and I was merrily driving onto an empty motorway, gliding from outer lane to middle lane and just about to glide at full speed into the fast lane, having checked my mirror, when something "gut deep" stopped me and I split second stopped the manoeuvre into the fast lane, to be shocked into reality by my wing mirror blasting off my car and a speeding car racing by in the fast lane. That split second "gut feeling to stop", had saved my life. The car speeding in the fast lane was in my blind spot when I had checked my mirror to move. I remember thinking afterwards, what the hell made me stop? Now I can look back and recognize, that somewhere in me, there is something that "pre-senses" and reacts in milliseconds of moments and even before the conscious brain gets the signals. The question for all of us, is whether we follow our "pre-senses" or "gut hunches" or not!

And that is the awesomeness of our brains. We are wired up to deal with survival issues, where the sub-conscious drivers steer us into fight or flight and the conscious brain takes a back seat. Obviously if we have to "fight or run" we cannot be there opening a debate with our inner voice rationalizing whether it could be good to analyze the situation or negotiate with the enemy in front of us! However, the problems start when we are more and more permanently in this fight or flight state, even unaware that we are, with high levels of cortisol consistently being produced. And may I share that I am observing that daily more and more people are seemingly more and more living in a heightened fight or flight. And who can blame us? We are living in extremely uncertain times worldwide. We are living in what I would call a provoked "heightened" emotional state, where we are easily "triggered" and this could lead us to constant "amygdala hijack" (as described by Daniel Goleman in his book Emotional Intelligence) where our emotional reactions can be so sudden and overwhelming that our neocortex is "hijacked" and we lash out in rage or react in fear totally disproportionately, and only become fully aware after we have reacted and realized.

And the question is, in such times of uncertainty, in such times of change provoking the collective emotional brain to be constantly on alert, how do we learn to calm the brain and diminish the triggered reactions? I truly believe the answer is: the noisier it gets outside, the quieter we need to become on the inside. The more we can understand our own brain; fully comprehend our reactions; discipline ourselves to be calmer and balanced, the

more peaceful we can become with ourselves. And everyone is different. Some people find peace and quiet pursuing their hobbies and passions, others find peace through sport and more and more are finding peace through regular daily meditation practices. In fact, studies show that after a certain period of time of daily meditation the brain changes structurally and functionally: in particular, the amygdala shrinks!

The first step is awareness. I always tell everyone who comes on my course: observe your own brains; observe your reactions; observe what happens when you change the dynamics and do things differently; observe your own "triggers and limbic reactions" and then observe and sense others´ reactions. Mostly we are operating daily on 95% subconscious "programmes" running in our brains. When we begin to observe we begin to draw attention to these programmes and bring more of "ourselves" into conscious thinking, to rationalize and analyse what we are doing and how we are reacting. If you find yourself going into "fight or flight" or "sudden rage or extreme upset", observe it, notice the bodily reactions: sweating, shaking, blurred thinking, fast heart beat and try to "train" yourself in those moments to breathe deeply. We now know that breathing influences the electrical activity in the brain, so breathing through the nose in times of fight or flight can in fact help us to respond with a clearer head.

The next step is the question of how to discipline the brain into a calmer state of mind and finding your own way of doing this. Personally, I have been meditating between 45 minutes and 1 hour each day, over the past 2 months after attending the workshop of Dr Joe Dispenza last April in Rome. Dr Joe has written some amazing books about the brain and also delivers practical workshops worldwide, talking about changing the brain chemistry and shifting the brain away from the past and from past emotional adopted brain patterns into new chemistry and creating new patterns and the results for me in only two months have been amazing. My brain chemistry seems to have totally changed and I notice how much calmer, happier, peaceful, clearer thinking and sharper my brain state has become. But it requires dedication – as Dr Joe says – you have to do the work, like everything in life, you have to be consistent and determined, no matter what that means there is no excuse to say "oh, I am too busy" or "I don´t feel like it", it has to become a habit, part of your daily routine and part of your life.

But everyone is different: everyone has to find their way to become calmer. To not be in a permanent fight or flight. If there is no terror and panic around you now, where you are, in this precise moment NOW, then be peaceful, be calm. If there IS an emergency situation NOW, then trust your natural instincts, as they will react in their "perfect" way of reacting. Our brains are amazing, we just have to learn to work with them and optimize the way we work with them, bringing more consciousness into our daily lives, rather than allowing the subconscious drivers to run on automatic without us fully being aware. As the old Tibetan saying goes" Our brain is like a galloping horse. We either learn to ride the horse expertly with the reins firmly in our hands, or we allow the horse to gallop on wildly with us trying to keep up and bring it under control."

Which do you choose?

WHY YOU ARE SAFER WITH A PILOT THAN WITH YOURSELF DRIVING A CAR!

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Continuing with my fascination for the subconscious mind, it is quite incredible to think that we are probably 95% in our subconscious mind normally, which means we come in and out of the conscious thinking "present" mind only a 5%. In one of my previous blogs, I mentioned when I went swimming and consciously moved my attention to exactly "what" and "when" I was moving my arms and my legs through the water. And as soon as I did, it all went to pot! I commented on this with one of my groups of Neurolanguage Coaches doing my advanced course at the moment. One of them came back the next week and explained to us all what happened when she "consciously" drew her attention to mountain biking – the same thing had happened to her. She started to pay attention to her legs, pedalling, gears, hands moving brakes, steering and as soon as she did that, she started to lose rhythm and it all started going haywire!

The amazing thing is our subconscious brain, once it has "got" something, it operates smoothly and can perform that task, without the conscious brain having to "think". Certainly, when we are learning something new, the "conscious thinking" brain is in the lead and whenever we need to rationalize, conceptualise, make decisions, set goals, visualize, analyze, then we perform all of these in our "conscious brain", the executive part, the "director of the stage" as David Rock calls it (Your Brain at work). Once we repeat an action 3 times, another amazing part of the brain, the basal ganglia, recognizes the repetition and seminates the seed for a long term habit. Now, just think of all those actions you do, day in, day out without thinking about them. Just imagine getting up in the morning: getting out of bed, walking to the bathroom, taking a shower, walking to the kitchen, put the coffee on, start making the toast……. And all the time that you are doing that, I bet you are thinking about your day ahead!!! So, while your subconscious has you performing on autopilot, your conscious brain has drifted into the day´s events!

Last night, my Advanced group and I were working on powerful questions. As a Coach and as a Neurolanguage Coach, powerful questions are one of our major tools to steer our coaching questions one way or another. Interestingly I asked the group to become aware of their questions and to really think deeply about the question they would like to formulate at a given point of a conversation. When we moved into feedback, one of them expressed how uncomfortable she had felt, because she became "conscious" of being "conscious"! Meaning that her thinking brain, had suddenly realized that she had shifted into that thinking brain and out of her performing brain! Now my theory is, that actually it is good for us to now and then become aware and to be "present" in the moment and try to become aware of our subconscious programs and habits. Because as soon as we bring awareness into our automatic behaviours and habits, we are also able to correct any askew behavior or habit and realign it. It is almost as if, bringing the focus and attention to the "automatic", actually serves to correct, hone and fine-tune it.

Let´s look at this from two perspectives: the pilot and the advanced language speaker.

You are probably safer sitting in an aeroplane with a pilot, than you are with “yourself” driving a car. That is, unless you go for “driving” brush up lessons ever six months!!! For me, it is fascinating to understand that the subconscious minds of pilots are actually primed and trained for ALL eventualities. The rigorous training that pilots must go through normally every six months in a simulator, means that their subconscious is constantly being reminded and trained. This also means that any “unpolished” actions are also corrected and polished. As car drivers, it could actually serve us all to do some “check-up” training once a year, just to bring our awareness back again into how we are performing and it could really serve us all to do some “crash” simulation training. Actually, in some countries I do believe the AA and other driving associations offer the chance to learn what to do when the car skids, or you lose control or what to do in icy conditions. In this way, the brain can be trained for these eventualities.

Now let us talk about the advanced language speaker. Over many years, I have worked with people of all different levels and it is interesting to work with such advanced levels as they very much speak from their “subconscious” performing brain without thinking. Often, however, they have engrained mistakes that their subconscious is not aware of and does not pay attention to. As a neurolanguage coach, we are trained to be “tuned in” to capture those engrained habits through expert diagnostics tests and then we know how to gently bring the client into awareness so that their “conscious” mind starts to “sound the alarm”. Once the alarm starts to trigger and there is a constant reminder of the mistake, the question is how to then bring the new corrected way into the long-term memory, so that a new neural pathway is born that overrides the incorrect habit. There has to be a consistency and a complicity between coach and coachee to really get that new pathway forged. Explaining to the coachee how the brain does this, can really help the learner to “get” it!

As I always say to all the teachers who take my Language Coaching Certification Course, observe your brains. Observe when you are in subconscious automatic mode, and observe what happens when you shift that attention and become “conscious”. Creating new neural pathways means neuroplasticity, which ultimately means that you CAN change your brain!

WHAT DOES LANGUAGE LEARNING HAVE TO DO WITH CHICKEN SEXING!

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Never Underestimate the subconscious when learning languages!
Our subconscious brain never sleeps as it controls all our vital functions and processes. Even when we are asleep, our subconscious brain is awake and in a recently published study, we now have the proof that we can make memories during sleep. (Formation and suppression of acoustic memories during human sleep, Thomas Andrillon, Daniel Pressnitzer, Damien Léger & Sid Kouider, published online 8th August 2017).

Fascinatingly, our subconscious mind can even do things that we cannot consciously explain how we do them! Take the story of the Japanese Chicken Sexers, for example. As highlighted in David Eagleman´s book Incognito, poultry breeders worldwide travelled to the Zen-Nippon Chick sexing School in Japan in the 1930s to learn how to separate out male and female hatchling chicks. This was not an easy task as both sexes actually look the same, (forgive me for saying that to perform this task it was necessary to look at the chick´s derriere, which looks exactly the same for both sexes!), but somehow the experts were immediately able to distinguish them and thus separate out the males from the females. This process was necessary because the feeding regime for each sex was in fact totally different. The major problem was that even the experts themselves could not explain how they were able to draw the distinction. Somehow they had instinctively developed their expertise to do so. In fact, their way of instructing new chicken sexers was to stand next to the learner and watch how the inexpert learner decided whether male or female based on trial and error, and then would literally give feedback to say correct or incorrect. After some weeks, the learners reached subconscious mastery and they were able to successfully distinguish baby boy chicks from baby girl chicks, as thus become themselves expert Chicken Sexers. (The Art of Chicken Sexing, Richard Horsey, 2002).

Many of us who have learnt different languages and also coach others to learn languages recognize the importance of the subconscious brain and “passive learning”. When I look back at my own learning process for Spanish, I clearly remember how, when I first moved to Spain, watching the TV with only maybe a 10% comprehension, actually greatly accelerated my learning and I always encourage learners to listen to the radio or watch TV or even just have the TV on in the background in the target language, as the subconscious brain is in fact “listening”. Also, I remember week after week buying the Spanish QUIZ puzzles booklet (and I still buy them when I am there 😉) and religiously sitting hour after hour doing crosswords and puzzles in Spanish. This even took my Spanish to extraordinary native levels and even increased my vocabulary to words that even natives do not normally now, like the word for an avalanche of snow – ALUD – or the name for the lower part of the lateen sail – CAR - which I can still remember now.

Some years ago, I also had an interesting experience with one of my learners, who I am going to rename Tom. Tom was an absolutely avid reader, but quite unusually, he actually preferred reading in English and not in his native language, German. I can remember time after time, being absolutely amazed at the vocabulary he would be pulling out from his subconscious in our sessions. Vocabulary that was extremely native, sophisticated and that "normal" learners just do not use. I remember in one session he came out with the word "decimated" and I remember commenting, Tom where on earth did you learn that word? And he would nonchalantly reply, I guess it was in one of those war stories I was reading. His passive vocabulary was absolutely amazing!

So, I do believe, we should never underestimate the power of our subconscious in the language learning process and really brainstorm ways that we, as learners, can increase our "subconscious exposure" to the language or encourage our learners to explore their own subconscious potential. With the joys of modern technology gifting us with the possibility of switching languages n our devices, on TVS, internet, movies, DVDs, radios etc we can easily simulate language immersion situations that can greatly enhance our passive intake.

Interestingly in the study, Explicit and Implicit Second Language Training Differentially Affect the Achievement of Native-like Brain Activation Patterns in 2012 by Kara Morgan-Short at the University of Illinois at Chicago, evidence suggests that adult learners of a foreign language can come to rely on native-like language brain mechanisms. The study involved seeing whether explicit training, the traditional grammar-focused classroom settings or implicit training, under immersion settings, affect neural (electrophysiological) and behavioral (performance) measures of syntactic processing differently. The results showed that only implicit training, the immersion settings, led to an electrophysiological signature typical of native speakers. So, in conclusion, adult foreign language learners can come to rely on native-like language brain mechanisms, but the conditions under which the language is learned may be crucial in attaining this goal. So, again, my question is, how can we stimulate our learners to recreate immersion settings even when they remain in their own countries?

The more we share with our learners about the brain, the intake of the conscious brain versus the absorbing of the subconscious, the more they can tap into and experiment different exposure to the target language and discover what works for them on their own learning journey.