Breathing to the Core

Backing up Breathtwork with findings in Neurology and Brain Research

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We will access the connections between breathing and brain on three levels. This does not mean that I follow the theory of the triune brain, which was developed by MacLean in 1947. Although it is a model, which is widely spread and easy to understand, it is misleading and does not fit to what has been found in brain research since then. MacLean proposed three parts of the brain, which are relatively independent from each other and have different mechanisms of function. Modern brain research found out that all parts of the brain interact all the time in an intense and complex way, so that there is no useful place for a division of three functionally independent parts of the brain.

We start with the first level of brain guidance of breathing. So we go from the bottom to the top. This breathing centre can be found in the brain stem or medulla oblongata, the prolonged spin. This centre controls our breathing from the beginning to the end, day and night. Recent research has found two main complexes in that area, which perform different functions to monitor the breathing mechanism. The Pre-Bötzinger-complex serves as modulator of the breathing rhythm to adjust it to different situations and demands. The Pre-I-complex (I standing for inspiration) becomes active right before the inhale and keeps the breathing rhythm steady and constant. Researches assume that sudden child death has to do with problems in coordination of these two complexes.
The brain stem is closely connected to the reticular formation, which is a part of the brain spreading as a layer like a net throughout the lower parts of the brain. Its main function is to regulate the state of alertness we are in. If a person is more extroverted or introverted depends on the makeup of this formation. When we are sitting in the sun, relax and start to fade away, and suddenly someone steps on our big toe, our reticular formation wakes us up and immediately changes the breathing pattern.
The reticular formation is connected to the hypothalamus, which transports emotional information to the brain stem in order to adjust the breathing pattern to the emotional state.

Here we enter the second level of breath regulation following the question of the influence of emotions on our breathing process. I will first outline a theory of emotions I developed by generalizing findings in cell biology.
Every cell knows two basic states of existence. The normal state can be called the growth state. It consists of the normal functioning of the tasks a cell has to fulfil. This requires the intake of energy from outside and the output of energy from inside, an ongoing metabolistic process, which connects the cell to its environment and to other cells in an organism. So in growth state, the cell produces and consumes energy by investing it into its development.
The second state can be called the emergency or protective state. It occurs when the cell recognizes danger. Single cell organisms can be observed in changing their whole status when they encounter a toxic substance. As soon as they find a distanced position to that substance, the cell returns to normal functioning. In this state, the cell can only consume energy and is unable to produce it. So the energy reservoirs get used up when a cell has to stay in this state for a long time until it finally dies.

The analogy between a single celled organism and a complex being like mammals is striking. What a cell experiences at its relatively simple stage of development, still applies to the highly evolved species. Their whole organism reacts similar to a single cell. When there is danger, all energy, which is available, is directed towards coping with the threat. And this is reasonable from the viewpoint of survival.
However, when the amount of danger state exceeds the amount of relaxation, the organism starts to degenerate. This is the case when stress becomes chronic.
Why can stress become chronic? When a situation of danger is over, the organism needs sufficient time to integrate the experience. Animals, which have successfully escaped a predator need time to shake off their stress. After that, they can move on in normal functioning. Dangerous moments, which could be coped with appropriately, can even strengthen the capability to face danger in the future.
When the stressful experience cannot be integrated in the right way, the tension stays in the body and is activated in a similar situation. So the organism has to deal with the actual and the activated stress and needs double time to integrate, and so on. In addition to that, stimuli eliciting stress can be generalized. That means that situations, which resemble a former stress situation, although not dangerous, can be perceived as dangerous. When a person was injured by a green car, not just all green cars can be perceived as dangerous but eventually all green objects.
The stress reaction becomes dysfunctional when it is activated in situations, which bear no apparent danger. When we look at our fears in daily life, we can notice, that most of them have no immediate dangerous reason in reality. They are mostly the result of dysfunctional stress reactions arising from the chronic stress disposition of our bodies, which was built up over years, probably starting with birth or even much earlier. As we know from deep reaching therapeutical work like breathwork, the root of our stress patterns can be found in the earliest stages of our individual development. As we know from systemical approaches in therapy, these roots sometimes can be found in the chain of our ancestors.

How do we react to stress?
In principle, there are three possibilities we have in a situation of intense danger. In many cases, the first reaction is fighting. When fighting seems impossible, we try to escape. This is the fight-flight couple signified by a high activation of the sympathical branch of our vegetative (autonomous) nervous system. When even running away is hopeless and we are in immediate danger of dying, we freeze. This state is characterized with an activation of both the sympathical and the parasympathical branch of the nervous system. It causes a total shutdown of the pain system in the body and creates a split between body and consciousness (out of body experiences, also called dissociation).
The biological reason for the freezing mechanism is that the letal attack of a predator does not hurt. There is also a slight chance that the predator might think, its victim is already dead, so there is no need to kill it.
As therapists, we have to be very attentive at out of body experiences of our clients as they might indicate a posttraumatic reactivation or flashback, which needs careful and skilled therapeutical support.

A theory of feelings

I do not go into the semantics of feelings and emotions but use the terms as equivalents. When we assume that we have two main states of living, the growth state and the protection state. Emotions can be seen as translations of complex unconscious physiological reactions in the body. They arise to consciousness in order to help with orientation and coping with reality.

In our healthy and balanced growth states, we experience feelings, which tend to support and enhance this state: Joy, pleasure, motivation, interest, curiosity, and all other peak experiences. In the growth state, we want to create and to share, and the feelings that come with it serve to reinforce that state as it is beneficial to our health and well-being as well as to a good functioning of human society.
In situations of threat and danger, other feelings are set in motion: fear, anger, disgust, shame and sadness. These feelings help us to cope with the challenges and to find back to a balanced state. Each of these emotions has its biological function, which will not be explained here. But I want to present as hypothesis, that all these feelings are based on fear, so that fear can be seen as the key emotion in the protective state. When we are free of fear, we do not experience any of these emotions, and each of these emotions includes fear, like the fear of getting poisoned in the feeling of disgust.
So we can distinguish between two categories of feelings: Feelings related to the growth state and feelings related to the protection state. Here we can understand, why we talk about positive and negative feelings. Sometimes people say that you should not judge your feelings and that all feelings are okay, so there are no bad or negative feelings. But it is our organism, which signals that we are in a difficult and challenging situation when it creates “negative” feelings. Negative means, that this situation needs to be changed in order for the organism to find back to normal functioning, which is then labelled “positive”.

When fear is the root of all our “negative” emotional experiences, we can say that fear is the basic indicator of our emotional problems. So therapy deals basically with resolving fears and thus creating a permanent state of growth. So it is important to understand how fear is operated in the brain.

The centre for storing and operating fear is called the amygdale and is situated almost in the middle of the head. People whose amygdale is not functioning do not know the feeling of fear and are also unable to recognize its expression in other people’s face. The amygdale has the following characteristics: it operates totally unconscious, it reacts very quickly (the connection to the ears is extremely short – two synapses have to be passed, so that the signal arrives within 8 milliseconds). It is formed in the third month of pregnancy and has no timeline. Everything, the amygdale has stored in its memory (which is also called the procedural memory) is highly resistant to extinction. So we have an effective assistant for dangerous situations: reacting quickly and reliable. Its connections upwards, to the more complex centres of the brain, are very strong, while the top-down-control is rather weak – our mind can hardly stop our anxious feelings. The disadvantages are: The amygdale reacts also in situations, which just seem dangerous, and it reacts as if the danger was immense, when something in the new situation resembles an older situation, which had been very threatening. The amygdale cannot differentiate between past and present. And its memories can be very old, back to some months after conception.

How is the reaction chain, when danger is perceived?

A sensory input arrives at the amygdale, which sets of the alarm (-stress) reaction in the body and at the same time asks the hippocampus, which directs the conscious (declarative) memory in the associative cortex whether it has some information to this danger. This information is also forwarded to the prefrontal cortex (PFC), which is the decision centre, and causes a conscious prove of the situation. So the PFC can give its consent to running away as already initiated by the amygdale, or it can say, relax, calm down, this is not a snake ahead of you but a harmless stick. It will take some time till the anxious reaction subsides (weak top-bottom-control), but eventually we will relax.

In cases of fear disorder (chronic stress), the PFC does not succeed in calming down the amygdale. When someone is affected by a panic attack, it cannot be stopped by talking to oneself that there is no real danger. We can talk ourselves into fear, but not out of fear, when the amount of fear has gone over a certain threshold. The panic attack is just an outbreak indicating that the level of chronic stress is far too high.
So the cure for fear disorders (and we can deduce from what was said above, that most, if not all psychic disorders are basically fear disorders) is to strengthen the top-down-control. What can breathwork do for this purpose?
First we can see that intensified and connected breathing can bring us to the point where fears were originally formed. Situations of danger are always connected with the intensifying of breathing. The body needs more energy, so the nervous system switches automatically to an accelerated rhythm. In addition to that, connected breathing means that the pause on the exhale is omitted, which also resembles to stress situations. So the amygdale is alarmed and asks the hippocampus for more information, which in turn activates the associative cortex. From there, images and old memories are provided which are connected to old memories. So we reach the root of fear imprinted patters and can face them consciously while feeling in a safe and caring surrounding. The brain also realizes, that the body is lying in a relaxed position on a mattress. So there most be enough information signalling on various levels to the amygdale, that there is no real danger. Thus it can put the pattern aside and will no longer react with stress impulses when similar situations are encountered.
This is what we mean by integration: The more evolved parts of our brain improve their influence on the lower parts. So the check of reality outweighs the old reaction pattern of the fear centre.
But there is a limitation to this method. After some time, the amygdale will no longer produce fear when encountering the abnormal breathing pattern. We notice that after a couple of breathwork sessions, the emotional outbreaks become less intense and subside in the ongoing course of the therapy. The amygdale has finally learned that there is no life threatening danger in a breathwork session. At this point, some clients ask themselves if the session has been of any value without screaming, steaming and sweating.
The ongoing value of a breathwork session can be seen in the high degree of relaxation that can be achieved by continuously keeping the attention on the flow of breathing. When the major traumatic patterns have been cleared, the work is dedicated to refining and cleansing and clearing the micro-traumas of daily life in a stressful environment. To be aware of our breathing is an excellent tool to detect tensions and distortions of the inner balance as soon as they arise. With experiences in breathwork, we can after self diagnosis apply a self therapy by re-establishing the inner balance with the help of breath relaxation.
Generalizing, we said that the major and basic component of all disorders is fear. So the mayor remedy to emotional and physical disorders can be seen in relaxation. And this is what we learn in breathwork: To relax by relaxing the exhale.

PFC in crisis

Due to findings in brain research, the PFC had to face a deep crisis of its self understanding in the last decade.
Here a short story in Turkish costume to illustrate what could have happened:
A rider clad in black came down a dusty road in central Anatolia. He rode a donkey. On his way, he met an old man with long beard and white hair with the name of Mevlana Chelaleddin Rumi. The old man did not care about the rider but asked the donkey: How do you know that you have a free will? The donkey said: I do what I want, following my decisions.

Rumi asked: But you do what the rider commands. When he kicks you on the right side, you go right. When he kicks you on the left side, you go left.
The donkey said: Not quite so. When he kicks me on the right side, I think to myself, I now go to the right side in order to please my rider and receive good food in the evening.
Now Rumi looked deep into donkey's eyes: And what, dear donkey, when you consider the idea, that free will is just an illusion?
The donkey's eyes widened and lit up. At this moment, he was enlightened.
But the question remains: Who is the rider?

What are the findings? Decisions about what we do, are not formed in the PFC as was presumed up to then, but in the subconscious parts of our brain. Then the decision is presented to the PFC, which adds the component: I do it from my free will. So Advaita teachers who claim that free will is just an illusion have scientific support, and the defenders of free will a serious challenge to meet.

Myths about the brain

Myth 1: We often hear that the world needs to become more conscious in order to improve or to survive. We also hear that we need to become more conscious in order not to cause problems and
When looking at our brain, we can reply: We need to become more unconscious when we want to survive and to improve. Consciousness is a process, which requires a high amount of fuel, that is glucosis and oxygen, From all organs, the brain uses most of it, and within the brain, most of it is consumed by the cortex for keeping up consciousness. So our brain works on outsourcing all the activities, which do not need consciousness. The brain automatizes as much as possible for economical reasons. So modern economy is just a copy of what the brain has performed over millions of years. Consciousness is reserved for new situations and creative challenges. As soon as we have learned a new behaviour like riding a bicycle, we forget about how it works and just do it. Our consciousness is no longer wasted on figuring out, which leg has when to go down and how we move the upper body to stay in balance. Buddha's high consciousness cannot be seen in the constant use of his conscious thinking but in his ability to limit this function to its absolute minimum.

Myth 2: Along with the call for more consciousness we hear that we just use 10 %, sometimes even less, 5% of our brain and that we should use more of it, suggesting the seductive idea that our intelligence could multiply with 10 when we use all our brain, so we come from an IQ of 120 to 1200. Then someone shows us Mr. Einstein's crumbled face giving the impression that this was a man who really used his brain, and if we do alike him, we can run for the nobel prize next year.
First of all, no one knows, who was the clever marketing director who invented the myth. Intelligence is not about using large amounts of the brain, but is about minimalizing the areas that are used for a certain activity. Einstein was intelligent not by using all of his cortex for his calculations, but by organizing his brain in a way that allowed a high degree of unconscious processes in support of the consciously intended results. So we should advice people to use as little brain as possible when they want to achieve good results and stay healthy at the same time.

Myth 3: Now when the brain needs 25% of the oxygen intake for its functioning, it is a obvious conclusion that breathing more supplies the organism with more oxygen. As a consequence, the brain has more fuel and can think more and better. Some advertisement of breathwork classes offer this benefit.

The blood is saturated with oxygen up to 97 %. More is not possible and not useful. Breathing more, does not The brain always takes as much oxygen as it needs for its activities. If there is a surplus of oxygen in the body, the body tries to get rid of it by exhaling it.
Myth 4: The brain model of the triune brain presented by McLean in 1947, became popular because of its simplicity. It proposes three parts of the brain, which work differently and independently, namely the reptilian brain, the older and younger mammal brain. These parts are said to have developed by building up the brain like a pyramid over the millions of year of evolution with the younger mammal brain, the cortex, as summit.
As we know of now, the brain does not have parts, which operate isolated and independently. It is a highly cooperative integral organ with many parts which are specialized for certain procedures but need close interaction with other parts in order to be able to function properly. Further, the idea of a hierarchical build-up of the brain is not correct. Even the dinos had a cortex with maybe a less dense structure as compared to the human cortex.
Myth 5: The brain is mainly occupied with processing information that comes in via the sensory organs and with preparing the appropriate behaviour.
When we look at the cortex and its relationship to the rest of the brain, there is a striking difference in the amount of neuronal connection within the cortex and from the cortex to the other parts of the brain:
100 millions of neuronal connections serve for the communication for the cortex to the other parts of the brain.
In the cortex, we have 50 billions of neurons, which build up to 500 trillions of internal connections. Each neuron can connect to up to 10000 other neurons. It is like we have 10000 friends and communicate with them on a regular basis.
We can equate: 1 input to the cortex + 1 output from the cortex = 1 000 000 internal connections in the cortex.
This means that a high degree of the activity of the brain is used for internal communication, information processing and organization. Our cortex is permanently occupied with creating new models out of the sensory data, which come in from the senses. This is all the noise we hear in our head, when we close our eyes and start to meditate.

Mirror-Neurons and healing Presence

Why do adults open their mouth when they feed babies?
Why do we grimace our face when we see that somebody suffers from pain? Why do lovers move similarly?

We are talking about imitation, sympathy, empathy, adjustment of patterns etc.. But how why and when it functions was hidden up to now - like the reasons why the planets move before calculation of the law of gravitation. In the course of developing new methods of brain research and on interpersonal understanding not so long ago an interesting discovery with extensive implications for our idea of man and for therapeutic business was made: The Mirror-Neurons.

But lets first get into the laboratories of the researchers... All began with our closest ancestors, the chimpanzees, who by the way share 99 percent of our hereditary disposition. One of them – let's call him Toni, was willing to undertake a simple experiment. He was observed with a so called medical imaging on a very simple activity: by grabbing a peanut. It was measured which parts of his brain got active in which order when grabbing the nut. A regular and not very surprising development showed: At first neurons responsible for action planning where

activated – a strategy is being searched of how the peanut could simple and effective get into Toni's possession. When the strategy is chosen and verified, the information is given to the executive neurons, who themselves activate the muscle cells – and the peanut is being captured. The whole procedure happens within 0,1 to 0,2 seconds.

Asterix-Neurons

Mirror-Neurons are one of the hottest and widely discussed newcomers of neurobiology because they offer empiric prove for the processes of interpersonal understanding. Now it can be testified and scientifically ensured that human understanding is not a coincidence but belongs to our basic conditions and functions of our existence which evolution provided for us. In other words, it will be an object of clarification why people don't understand each other sometimes and not why they understand each other or – understanding is primer and misunderstanding secondary. Therapists know this insight already: Like a well known hypno-therapist is stating by being asked how one can establish the Rapport to a client: “Just don't disturb it.”

Actually, we possess two different neural systems and neuronal circuits. Some are the planners, they are also called Asterix-Neurons, others are the practitioners, the Obelix-Neurons. They only get active when they get an instruction from the Asterix-cells. Behind every activity there is a plan – if we are conscious about it or not.

So far so good. The researcher's curiosity was not at it's end – and now that Toni is already wired one one is going to take advantage of that. Let's see what happens when Toni sees that his friend Franz grabs a nut. And here comes the surprise: Toni's Asterix-cells specialised on nut-grabbing bestir themselves the same way as he himself wanted to grab the nut. Toni notices what goes on inside Franz, if the latter is grabbing the nut, as if Toni himself would act. Toni gets it what goes on in Franz , if the latter grabs the nut, as if he himself would do it. (doppelt??)This procedure happens again fast as lightning and unknowingly. It can neither be consciously implemented nor hindered. Tonis Asterix-Neurons are getting active and reconstruct, how it was like to grab the nut himself. Also if Toni sees only rudimentary what Franz is doing, his brain reconstructs what could take place in reality.

These research findings could be transferred on men and considerable extended. For example it was found that humans react with an activity of own pain-mirror-neurons on seeing how somebody is pricked with a needle. The reaction also takes place when it is only mentioned that pain is inflicted on somebody. So sympathy is not a special virtue, but a normal behaviour of our nervous system.
Test persons who are watching how a person was given a nauseous substance for smelling react with an activation of the brain-center of disgust without getting in contact with the substance itself. If however somebody's center of disgust is disturbed he won't sense disgust nor disgust when expressed by others will be recognized.

This example clearly shows that we don't only have mirror-neurons only for visual perception but for all our sensual ports - acoustic, haptic, olfactory perception can trigger mirror-reactions in us. What we call intuitive understanding could result from a co-action of different systems of mirror-neurons.

As Paul Watzlawick postulated years ago that we „cannot not communicate“ - we know now, that we cannot not understand. We permanently feel with our fellow men, again whether we

consciously want it or not. Our neuronal networks continuously retrace, what is going on in others and can reconstruct how they are doing.

Stress and Misunderstanding

Wonderful – then everything is in blissfulness and harmony! There is nothing in the way of universal understanding of humans, we have all the necessary hardware and only need to make use of it. But why is there misunderstanding, why do we feel misunderstood from time to time, find others inapprehensable or hear that they didn't understand us? Why are people actually able to get out of these unconsciously finespun nets of communication ?

Additionally, we have to consider that those mirror-neurons can only be applied under relaxed conditions. If there is stress, our emergency-systems take command and shut down all luxury programs including our inter-subjective programs of comprehension. Under pressure we cannot react intuitively and sympathetic, but only „instinctively“. Our emergency programs concentrate mainly on their own survival – and at best on that of community.

The other one – the stranger - is classified as a possible threat and considered with suspicion. At best we can perceive him as a possible support for our self preserving purposes. Under stress we react egoistical, and our world-view is reduced to the narrow horizon of our coined patterns of reaction that are controlled by old fears and expectations. Besides time-pressure prevails: quick decisions have to be made so that the threatening problem can be disposed as soon as possible.

In contrast, interpersonal understanding needs time. Leisure, relaxation – let's drink a cup of tea together in peace, so we loose the necessity, to accomplish our ambition. The other person becomes more important and her point of view can be more interesting than one's own. Insensitive, inconsiderate and violent actions emerge from stressful situations and are unexceptionally the result of inner pressure – the root of stress is always a sort of anxiety.

If we want to understand somebody, we have to relax. If we are under tension, the understanding is more difficult and more complex, because we need to exert other systems for this activity than those predestined. We construct understanding instead of letting it proceed. We behave like autistic people in such situations and are astonished, if our communication partner reacts irritated. Because he notices that I am not really with him but only pretend as if I was. Myself behave like an autistic individual.

Autism

A reason for autism is that people with this symptom did not develop mirror-neurons in their early childhood, because they had insufficient or wrong incitation. Our nervous system (unfortunately) functions on the principle of „use it or loose it“: If we don't make use of something, it will be undeveloped or gets lost. If mirroring is not provoked in a baby and an infant through creative communication and playful incitation, then this ability is not or only inadequately developed. Autistic persons can later on learn to understand die emotions of other people, but only if they quasi calculate, what a person in a certain situation could feel.

This coherence was detected in a survey at the University of California1. Analogical measurement data with autistic children endued a smaller activation in a certain area of their brain than non-autistic children. It was the area that plays a role in recognizing other's frame of mind. The extent of activated mirror-neurons conformed the extent of the social disfunction. The more marginal the activation, the stronger was the disfunction of the children.

Autism also has an impact on the ability of a person to communicate with others and to react adequately on signals in the environment. In a survey patterns about brain activity ten autistic children were tested, while imitating a facial expression or watching it passively. The facial expressions matched feelings like fear, anger, sadness and happiness. The researchers compared these results with those of ten not autistic children at the same age who had the same IQ.

Although the autistic children were able to solve the demanded task, they both times had a smaller activation in a region of their brain that contains mirror-neurons. It is a part of the lower convolution of the brain. In the emotional center of the brain, the insula and the amygdala, the autistic children also showed a limited activity.

The researchers assume, that autistic children have to use other regions of their brain, to solve the demanded tasks. It is possible for example, that they pay more attention to visual and motor indications, without experiencing the emotional meaning of the imitated facial expression.
Brain researchers have furthermore detected, that a suffering face effects the limbic system of the observer and his emotions: the sight of people experiencing pain enhances the blood circulation of the amygdaloid nucleus (Amygdala), changes the facial expression of the viewer and casts a cloud over his psyche. This way, ideas and enthusiasm can ignite from one person to the other and convey moods.

Healing Presence in Therapy

The therapeutic relation counts as the most important fact for a therapeutic success. From the view point of brain physiology this seems to mean that a therapeutic process shows better results the more mirror-neurons can be applied. As stated before, the mirror-neurons only get activated if there is no pressure and stress. The more relaxed a therapist is in a session the better he can unfold empathy and intuition. Presumably Sigmund Freud meant with an attitude of “free floating attention” that a therapist should bring freedom from distraction, exposure and tension into the session, that makes the floating possible at all. A hypnotist builds rapport through the suggestion of relaxation and only if he can transfer the relaxation onto the client the hypnosis works.
Anke Ehlers and David M. Clark, professors of psychiatry in Oxford, proved that a client can activate his positive resources effectively only in an atmosphere free from anxiety. Otherwise stress connected to a rising hormone level of cortisol blocks the ability to recall verbally coded knowledge or events with an emotional quality. Solely the therapist is responsible for this atmosphere – it is her challenge to create the atmosphere for a successful healing.

Therefore it is important, that the therapist himself traces her fears and blockages, that could hinder her own relaxation. May those be ever so subtle, they can limit the therapeutic success.

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1 http://www.nature.com/neuro

Supervision serves the purpose of the therapist's reflection on topics that could hinder the contact to her client. If the specific fear behind the pattern is brought to light, the therapeutic process can be eased and new gates of comprehension for the client may spring open.

Real understanding grows from a complex communication, and the most relevant data that are necessary for a change are delivered on a preconscious level. Therapeutic understanding doesn't require explicit knowledge, no theoretical approach about a specific dysfunction of a client, but an active presence. Knowledge is not amiss and can deepen understanding, but is secondary in a therapeutic process. Knowledge without intuitive understanding is therapeutically irrelevant. The therapist can not obtain from books or lectures how to refine her own mirror-neurons. This only works from own experience, and this is the reason why all therapists have to absolve an own educational therapy and should keep on continuing education.

In the Moment with the Breath

To notice, what takes place in the client from one moment to the other the sitter has to be fully in the moment. As soon as he zones out, gets into thoughts or mobilizes memories, contact and possibilities of mirroring will be limited. With full attention onto our client we get the maximum of information, also information that may not be conscious to himself. With this degree of attention we can notice emotions arising in the client, also when he is not aware of them because our mirror-neurons communicate with those of the client and not with his incidents of awareness.

How do we notice that we are present? If we are connected to our breath, we are present automatically. We cannot perceive our breath from a little while ago or from the day after tomorrow. We only have to let our consciousness rest on our own breath, while we perceive above all, what goes on in the client , while she is breathing.
Through the breath we can also experience how present we are. If our breath is relaxed and free, we can assume, that all necessary information of the client approaches us. Our interventions or non-interventions flow from these proceedings of transference . If the mirror-neurons of our client signals that a touch on her belly could be helpful and convenient, we get the “feeling” to touch her there. Afterwards our client may say: “It was just the right moment when you put your hand on my belly” and possibly think we are able of mystical powers. But in reality we only paid attention to stay present and connected to our own and her breath. Under these circumstances we will transmit the information undisturbed that are necessary for a coherent and harmonious accompaniment.

If our breath is tense, we notice that we are distracted and don't conduct fully present and attentive. This is a certain signal that can prompt us to direct our concentration again fully on what is happening with our client. Nobody is able to permanently and constantly focus exceptional only on the client for any length of time. Especially if breathing-sessions run unspectacular on the outside and only a little active intervention is needed at some moment our attention will zone out. We can make use of our breath to notice when we are busy with our own thoughts and emotional patterns and in relaxing our breath again, we can fully involve into the development of the session again.

The conjoint swinging with deepened contact is the basic form of emotional relations and bonding. This way, every baby builds trust into the world and into other people. The healing of therapy is due to this form of pre-verbal understanding that is created again and can cure disorders that have hindered building a healthy relationship between mother and child. The

special form of trust we know from the atmosphere of breathing-sessions presumably draws its depth especially from not much or no verbal communication, but instead a key of early communication that is chosen – the communication of breath.

It is this clime of presence in a common breath in which special healing thrives: I am here with my breath for you, wholeheartedly and fully. I am with your breath, I follow it, play with it, influence it and let myself be influenced by it. A new form of understanding establishes that existed long before language was used and can therefore penetrate the deeper layers of our psyche.
The conformance and exchange in and with the breath is the main media of breath-therapeutic communication. All other therapeutic tools, techniques, interventions and strategies are secondary and can only be applied if the aspect of relation is right, that is constituted over the dialogue of two breathing rhythms. Then we can assume, that also the communication of the mirror-neurons works.

Recommended reading:

Antonio Damasio: The Feeling of What Happens: Body and Emotion in the Making of Consciousness Harvest/HBJ Book
Susan Greenfield: The Private Life of the Brain: Emotions, Consciousness, and the Secret Life of the Self. John Wiley & Sons Inc
Joseph LeDoux: The Emotional Brain: The Mysterious Underpinnings of Emotional Life Phoenix
Sabine Maasen, Wolfgang Prinz, and Gerhard Roth: Voluntary Action. Brains, Minds, and Sociality: Brains, Minds and Sociality Oxford University Press

In German:
Joachim Bauer: Warum ich fühle, was Du fühlst. Hamburg: Hoffmann und Campe 2005
Gerhard Roth: Fühlen, Denken, Handeln. Frankfurt: Suhrkamp 2003