

How Does Rebirthing Breathwork Work?

Seeking a new consensus

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Introduction

Most people who undertake rebirthing style breathwork experience a profound and positive ‘shift’ in their quality of life. This improvement typically manifests as:

- Feeling more ‘rooted’ in oneself, more centered and realized
- More attuned and attentive to one’s own needs and aspirations
- Better able to access the resources – courage, strength and determination – necessary to realize one’s dreams

Important as these changes are to our quality of life, they have other, far reaching effects on those around us. Improved self-awareness plays into the virtuous cycle of qualities that characterize ‘emotional intelligence’¹ – better self-management, enhanced interpersonal awareness and greatly improved relationship management.

These changes in outlook and behavior are often accompanied by relief from a whole range of psychosomatic symptoms such as headaches, stomach cramps, as well as back, neck and shoulder problems.

¹ Goleman, Daniel (1997) *Emotional Intelligence: Why it can matter more than IQ*

Within the breathwork tradition, a frequently encountered explanation for how breathwork produces such profound personal change and transformation is that it arises from an altered state of consciousness (ASC) induced by the changes in brain chemistry that result from deeper, faster breathing.

Within this explanatory framework a range of different mechanisms have been singled out to account for how such an altered state of consciousness arises:

- Hyperventilation
- Oxygen saturation
- Release of peptides and endorphins

These various explanations do not exclude one another. Rather, they offer a range of different perspectives on what is happening during breathwork. Whether or not they are sufficient to explain how breathwork ‘works’ is an open question. But before deciding, we first need to understand what the suggested mechanisms are.

Hyperventilation

The deeper, faster breathing used in rebirthing style breathwork is sometimes characterized as a non-pathological or voluntary hyperventilation. Since hyperventilation is known to alter the brain’s chemistry, and since breathwork is thought to involve ASC that facilitate change and transformation, then, the argument goes, these three items must be related². But is this correct?

Let’s start with the first assumption – breathwork is a form of voluntary hyperventilation. If this is false, then this whole approach must be re-thought and the transformative powers of breathwork sought elsewhere.

² Manné, Joy ‘Dialogue on Hyperventilation between Kylea Taylor and Joy Manné’ *The Healing Breath: A Journal of Breathwork Practice, Psychology and Spirituality*, Volume 1, Number 2, pp. 11-30

Does rebirthing style breathwork involve hyperventilation? Hyperventilation is a medical condition defined as a pattern of chronic ‘overbreathing’ resulting in the exhalation of too much carbon dioxide (*hypocapnia*). This upsets the chemical balance of the blood (making it more alkaline) and binds the oxygen to the blood instead of releasing it to the cells of the body. We experience this at first as breathlessness and then as suffocation. Increasingly panicky breathing results in even more carbon dioxide being lost making the problem worse and reinforcing a vicious cycle. People who suffer from ‘panic attacks’ and other anxiety disorders are prone to this type of attack, which is a recognized medical condition known as ‘Hyperventilation Syndrome’ (HVS).

Although the kind of breathing used in breathwork has been called ‘voluntary hyperventilation’ to distinguish it from this medical condition, our question was, “does breathwork involve hyperventilation?” The correct answer, I believe, is no. And when done properly, it should not. Breathwork is completely different from hyperventilation for the following reasons:

1) Most breathworkers routinely coach their clients in an optimal way of breathing (called ‘circular breathing’) that progresses their session whilst specifically avoiding the dangers of hyperventilation. This is primarily achieved through relaxing (rather than forcing) the exhale. This became a standard practice even in the earliest days of rebirthing. ‘Rhythmical breathing’, as it was then called, involved,

*“pulling on the inhale and relaxing on the exhale in a continuous stream so that the inhale is connected to the exhale”*³

Even Grof’s Holotropic Breathwork, which has a more *laissez faire* approach to breathing, suggests the use of circular breathing at the start of a session⁴. Irrespective of

³ Orr, Leonard & Ray, Sondra (1977) *Rebirthing in the New Age* p. 83

⁴ Taylor, Kylea & Manné, Joy ‘Dialogue on Hyperventilation’ *The Healing Breath, Volume 1, Number 2* (p.17 & 18)

the ‘school’, all breathworkers recognize that once a certain level of inner ‘energy’ has arisen a rhythm and depth of breathing are experienced that defies the need for any kind of control.

2) Breathlessness, which is symptomatic of hyperventilation, is not characteristic of breathwork. Its occurrence signals that the client is doing something wrong and needs to correct their pattern of breathing and to relax more. No one would willingly engage in breathwork if it resulted in sensations of suffocation!

3) If some of the other typical “symptoms” of hyperventilation – tingling and tetany (the tensing of certain muscles, especially the hands and around the mouth) – are experienced, they are only minor and temporary phenomena and disappear completely after 2 to 3 sessions. These symptoms are experienced without any accompanying breathlessness and are therefore not necessarily related to hyperventilation. In breathwork circles they are often interpreted as the surfacing of psychological patterns of control.

4) Finally, the people who actually suffer from Hyperventilation Syndrome (HVS) do not, as a result, experience profoundly positive change and transformation. They suffer from panic attacks. Period.

Therefore, breathwork is not hyperventilation – voluntary or otherwise – nor, with some basic precautions, should it ever lead to hyperventilation (*hypocapnia*). Therefore the transformative effects of breathwork cannot be due to an altered state of consciousness (ASC) induced by hyperventilation.

Oxygen Saturation

Is oxygen saturation a natural outcome of deeper breathing? Even with normal breathing people typically have oxygen saturation (SAT) levels of 95% to 99%. Vigorous breathing is not going to increase our saturation levels that much. High levels of oxygen saturation

certainly sustain health and well being, but hardly qualify as a suitable mechanism for promoting major life change and transformation. Therefore the transformative effects of breathwork cannot be due to an altered state of consciousness (ASC) induced by oxygen saturation.

What about the release of peptides and endorphins?

*“changes in ... breathing produces changes in the quantity and kind of peptides that are released from the brain stem ... many of these peptides are endorphins, the body’s natural opiates ...The peptide respiratory link is well documented: Virtually any peptide found anywhere else can be found in the respiratory center. This peptide substrate may provide the scientific rationale for the powerful healing effects of consciously connected breath patterns”*⁵

The experience of a natural “high” during breathwork is one thing (and breathwork can be immensely pleasurable) but we still have to go back into the rush of the city, our jobs, lives, and so on, any or all of which may have the opposite effect upon us, even to the extent of releasing a tidal wave of chemical stress into our bodies! Despite this, breathwork continues to facilitate profound personal change and transformation, involving choices, decisions and follow-up action, in the days, weeks and even months after our sessions are over. Therefore the transformative effects of breathwork cannot be due to an altered state of consciousness (ASC) induced by peptides and endorphins.

Altered / non-ordinary states of consciousness

Many of the physical explanations we have explored are provided to justify the idea that rebirthing breathwork involves an ‘altered state of consciousness’ (ASC) that is responsible for the change and transformation that we experience. As we have just seen,

⁵ cited by Manné, Joy (2004) *Conscious Breathing: How Shamanic Breathwork Can Help Transform Your Life* (p.142). The reference is to Candace Pert’s ‘*Molecules of Emotion*’ (1997) p.186

most of the bio-physical mechanisms that have been suggested as supporting an ASC fail to do so. And this leads us to ask the questions:

- Are ASC an essential element of rebirthing breathwork?
- And if so, how do they account for its profoundly transformative effects?

We define ASC as states of consciousness other than those associated with: (a) mental disorder, (b) the many varieties of normal wakefulness and (c) the various levels of sleep. This leaves us with a broad range of ASC that break down, very roughly, into two overlapping groups:

- Transpersonal states that provide access to non-local sources of information (remote viewing, out of body experiences, perinatal⁶ and past life memories⁷)
- Transformational states giving rise to profound personal change and transformation (near death experiences, and the broad spectrum of shamanic, ecstatic and meditative states)

Within these broad classes of ASC we are only interested in those states that directly give rise to profound personal change and transformation. Dr. Stanislav Grof, one of the great pioneers of breathwork, has characterized the states of consciousness that arise during breathwork as ‘*holotropic*’, meaning that they ‘tend towards wholeness’⁸. That is to say, they are naturally or innately healing.

⁶ A word coined by Dr. Stanislav Grof for the period in and around our birth process. The experience from our own practice clearly indicates that memories can be formed early in foetal development. A mother’s decision to undertake a termination, that was not carried out, created the traumatic memory of “the fear of losing this chance for life” in the foetus.

⁷ From a therapeutic perspective it makes no difference whether we are dealing with past lives or “past lives” just so long as real change and transformation takes place!

⁸ Grof, Stanislav (1993) *The Holotropic Mind: The Three Levels of Human Consciousness and How They Shape Our Lives* p.206

“Holotropic states tend to engage an “inner radar” process ... The process brings into awareness the contents from the unconscious that have the strongest emotional charge, are most psychologically relevant at the time, and most readily available for conscious processing”⁹.

The holotropic states that Grof seems to have in mind are those in which memories of trauma or emotional upset become ‘activated’ (re-enter conscious awareness) due to vigorous breathing and are then ‘released’ or otherwise integrated.

Grof classifies the ‘contents from the unconscious’ that emerge during such processes as coming from different ‘layers’ or ‘levels’ of consciousness:

- Biographical¹⁰
- Perinatal¹¹ (in and around our birth process)
- Transpersonal¹² (outside our current timeline e.g. past lives, other dimensions etc).

The dramatic cases of healing that he reports are often associated with vivid perinatal and transpersonal experiences. And yet for most people who undertake breathwork, these kinds of experience remain the exception, rather than the rule. They are atypical of breathwork in general. And so we must ask: in the absence of dramatic and unusual experiences like these, does breathwork still induce positive change and transformation? The answer is yes, absolutely. Breathwork “works” irrespective of the specific content of any person’s experience. I can have a powerful experience without a particular memory becoming activated or even being associated with the experience. And so if the positive effects of breathwork do not depend upon having any particular experience – whatever your experience is just fine – then how can its positive effects possibly be due to ‘non-ordinary states of consciousness’?

⁹ Grof, Stanislav ‘Psychology Of The Future: Lessons From Modern Consciousness Research’ in Schlitz, Amorok & Micozzi (eds.) (2005) *Consciousness & Healing: Integral Approaches to Mind-Body Medicine*

¹⁰ Grof, Stanislav (1993) *The Holotropic Mind: The Three Levels of Human Consciousness and How They Shape Our Lives* p.21

¹¹ *ibid* p.28

¹² *ibid* p.83

The ‘Holotropic Thesis’ – breathwork is energywork¹³

Claiming that the effectiveness of rebirthing breathwork cannot reside in an altered state of consciousness – whatever its content and whether it is classified as ‘holotropic’ or otherwise – does not mean that we reject the ‘holotropic thesis’. On the contrary, we affirm that rebirthing breathwork is fundamentally and inherently ‘*holotropic*’. But we need to expand our understanding of this concept to encompass more than just states of consciousness. Rebirthing breathwork involves not so much a ‘*holotropic*’ ASC, but our total state of being. In other words, we experience the ‘*holotropic*’ energy of breathwork throughout our bodies and only secondarily, and not in all cases, as an ASC (identifiable by the surfacing of biographical, perinatal and/or transpersonal content).

The one universal reality of every rebirthing breathwork session is the breath induced experience of high levels of internal energy. We need to answer the following questions:

- What kind of ‘energy’ is this?
- Is it the kind that arises from metabolic action or some other kind?
- If it exists, can it account for the kind of profound change and transformation experienced as a result of rebirthing style breathwork?

Can we be more precise about what we mean by ‘internal energy’?

I would like to suggest that the holotropic state that circular breathing gives rise to is a direct result of increases in our vital/subtle energy – *prana*, *qi*, *life-energy* or whatever you would like to call it – in a quite literal and yogic sense. In western scientific thought this concept is called ‘*vitalism*’ and it is perceived as a reversion to ‘pre-scientific’ or even ‘primitive’ superstition.

¹³ Manné, Joy (2004) *Conscious Breathing: How Shamanic Breathwork Can Help Transform Your Life* p.25

The dismissal of alternative models of reality, and specifically this type of ethnocentric arrogance, disappeared from anthropology decades ago. Unfortunately it continues to linger on in many other fields, especially medicine. I would like to suggest that we are, by now, at a point to move past this limited and limiting perspective by taking account of recent scientific research. This *Qi*/life- energy is called:

- ‘Subtle’ because it is not apparent or ‘visible’ to the majority of people (although it is ‘visible’ to a large number, but very small percentage of people)¹⁴
- ‘Vital’ because it is ‘negatively entropic’¹⁵ – or ‘syntropic’¹⁶

By ‘syntropic’ we mean that its effects are the opposite of those associated with entropy:

“a living organism continually increases its entropy - or, as you may say, produces positive entropy – and thus tends to approach the dangerous state of maximum entropy, which is of death. It can only keep aloof from it, i.e. alive, by continually drawing from its environment negative entropy ...What an organism feeds upon is negative entropy.”¹⁷

Whereas entropy involves the processes of dissolving, disorder and decay; syntropy involves gaining in order, coherence and integrity. The notion of syntropy offers a working model of what we mean by healing in its broadest sense. Growth, healing, personal change and transformation are all inherently syntropic. A model of the physics of syntropic energy has been developed by Stanford professor Dr William Tiller¹⁸. Briefly, his argument is that:

¹⁴ Recall that 96% of the universe’s energy and matter (the so-called dark matter & dark energy) are utterly invisible to us

¹⁵ A term introduced by the physicist Erwin Schrödinger in ‘What is Life - the Physical Aspect of the Living Cell’ (1944)

¹⁶ Fantappiè, Luigi (1942) ‘The Unified Theory of the Physical and Biological World’

¹⁷ Schrodinger, Erwin (1944) *What is Life? The physical Aspect of the Living Cell* (p.25)

¹⁸ Tiller, William (1997) *Science and Human Transformation: Subtle Energies, Intentionality and Consciousness*

- The energies that define our reality, such as the electromagnetic spectrum, exist at speeds up to but not greater than the speed of light
- The reality they define – our mundane reality – exhibits entropic characteristics (everything, ultimately, falls apart, even ourselves)
- There is a class of energies (*tachyons*) that exist at speeds faster than the speed of light
- The reality they define is the mirror image of this reality, it exhibits syntropic characteristics
- These extremely high frequency energies exist naturally in all living things, they are the ‘life force’ and what we experience when we experience *Qi*/life-energy
- Our internal *Qi*/life-energy can be greatly enhanced through employing certain ‘yogic’ practices – especially breathwork (*pranayama*)

Tiller argues that we can recognize the presence of these high frequency energies because they produce measurable ‘sub-harmonics’ in the electromagnetic spectrum that cannot be explained in terms of conventional human physiology.

Does such energy really exist? There is a vast amount of experiential evidence that it does. Is there any experimental evidence? The scientific evidence is clear. An abundance of scientific studies have demonstrated that such energy exists and that it has syntropic qualities^{19,20}. In particular the meridian system that constitutes our ‘energy anatomy’ has been the subject of several research studies that have positively confirmed its existence^{21,22}. Simple technologies, such as those that detect variations in the electrical resistance of the skin’s surface, can be used to accurately detect the acupoints. Testing people with specific illnesses has demonstrated that the acupoints traditionally related to those illnesses exhibit large differentials in electrical conductivity as compared to those

¹⁹ Gerber, Richard (2001) *Vibrational Medicine: The No:1 Handbook of Subtle-Energy Therapies*

²⁰ Oschman, James L. (2000) *Energy Medicine: The Scientific Basis*

²¹ Motoyama, Hiroshi (1997) *Measurements of Ki Energy, Diagnosis, & Treatments*

²² Darras, J.C., de Vernejoul, P. & Albarède, P. ‘A Study on the Migration of Radioactive Tracers after Injection at Acupoints’ *American Journal of Acupuncture*, Vol. 20, No. 3, 1992

of healthy people²³. The meridian system not only reflects the state of our physical health, it pre-shadows the development of illness before any physical symptoms have had a chance to develop allowing preventive measures to be taken²⁴.

This classical 'energy anatomy' (perhaps most accessibly documented in classical Acupuncture) is characteristic of all non-western medical, personal and spiritual development systems, and has been used for these purposes for thousands of years. Needless to say, this 'energy anatomy' does not form a part of conventional western biology, medicine or psychotherapy. Nor should we expect an accommodation between the two any time soon. The slow, laborious processes of change that characterize fundamental shifts in a scientific paradigm may take many years and evolve through several stages before a new consensus emerges²⁵.

Does our *Qi*/life-energy increase with breathwork?

Standard biological and medical theory affirms that each of our organs and tissues emits an electromagnetic (EM) field in a known frequency range. The frequency range for the various organs and tissues of the human body are around 200 Hertz +/- (cycles per second). Less well known is the fact that these frequency ranges can increase enormously whenever the body's internal energy increases. The original observations of this linkage were made by Dr. Valerie Hunt at UCLA some 35+ years ago.

Dr. Hunt conducted research into the body's energy fields during an energy based therapy (a form of massage called 'Rolfing' or 'Structural Integration'). She employed the services of a distinguished psychic who observed events in parallel to the formal

²³ *Oschman, James L. (2000) Energy Medicine: The Scientific Basis (p. 21-22)*

²⁴ *ibid (p. 20-22)*

²⁵ *Kuhn, Thomas (1962) The Structure of Scientific Revolutions*

laboratory procedures²⁶. This provided the researchers with an independent commentary on the ‘perceived’ changes in the energy body as the study progressed.

Whereas the normal EM fields of the body are around 200 Hertz, the readings recorded over the approximate locations of the major chakras during Structural Integration ranged upwards of 1600 Hertz – far above anything known to biological science. In some cases they were too large for the recording equipment – quite literally off the scale. Dr Hunt observed that even these extremely high frequency fields appeared to belong to a:

“subharmonic of an original frequency signal which is in the range of many thousands of cycles per second: a subharmonic of the original chakra’s subtle energy”²⁷

This is exactly what Tiller’s model predicts. When the electrical readings were compared with the psychic’s testimony they matched the traditional descriptions of the color and intensity of the corresponding chakras as viewed psychically – confirming the ‘energy body’ connection²⁸.

Given that the normal frequency range of the brain is known,

- Does this frequency range increase, and increase dramatically, as a result of undertaking vigorous breathwork?
- Does it increase in a way that cannot be explained by normal physiology?

The answer to both questions is “yes”, it does. There is evidence of shifts in scalp Direct Current as measured by Electroencephalography (EEG) during short periods of hyperventilation. Now although breathwork is not hyperventilation, the intense breathing used for these experiments should have triggered measurable increases in vital energy

²⁶ Hunt, Dr. Valerie et al (1977) ‘A Study of Structural Integration From Neuromuscular, Energy field, and Emotional Approaches’ (online resource)

²⁷ *ibid*

²⁸ Hunt, Dr. Valerie ‘Electronic Evidence of Auras, Chakras in UCLA Study’ *Brain/Mind Bulletin Volume 3 No: 9 (March, 1978) cited in Gerber, Richard Vibrational Medicine p.133*

with a high likelihood of observable electromagnetic effects. Are there any signs of this in the results?

“The amplitudes of the HV (hyperventilation)-induced DC (Direct Current) shifts measured presently are an order of magnitude higher than signals recorded even during pathological conditions (e.g., seizure), and their duration of several minutes outlasts by far the slowest “conventional” EEG events One should also note that, in the present experiments, no ceiling level of the DC shift was evident within the 3-min HV... which means that even larger DC responses would have been caused simply by prolonging the duration of the HV period.”

The study concluded:

*“the present data are inconsistent with the widely accepted idea that slow DC shifts in the human EEG have a purely neuronal origin. Our present study demonstrates that slow potential changes in human DC/EEG are easily elicited During intense hyperventilation, these DC shifts are much too large in amplitude and duration to originate from neuronal activity”.*²⁹

It is at least intriguing that ‘hyperventilation’ triggers large and abnormal shifts in the brain’s electrical activity not attributable to neuronal activity. One can only wonder what would emerge if this research was repeated with experienced breathworkers undertaking full rebirthing breathing – without hyperventilating – for one hour! Studies have demonstrated the emission of extremely powerful magnetic fields from the head during the breathing used as a part of traditional Qi Gung³⁰.

Even if we accept that this ‘energy anatomy’ exists, can a breath induced increase in our level of Qi energy account for the profound change and transformation that we experience as an integral part of rebirthing style breathwork? The common experience of very high levels of internal energy with this style of breathwork is consistent with the age old traditions of Indo-Chinese yoga. Breathwork remains the fastest and most direct way

²⁹ Voipio, Juha et al ‘Millivolt-Scale DC Shifts in the Human Scalp EEG: Evidence for a Nonneuronal Generator’ *Journal of Neurophysiology* Volume 89: 2208–2214, April 2003

³⁰ Hisamitsu, T. Seto, A. Nakazato, S. Yamamoto, T. & Aung, SK. ‘Emission of extremely strong magnetic fields from the head and whole body during oriental breathing exercises’ *Department of Physiology, Showa University School of Medicine, Tokyo, Japan.*

of increasing our internal level of *Qi*/life-energy. But can this model also account for Grof's 'holotropic thesis' and, in particular, for his 'inner radar' process?

Emotions and the energy body

It is a commonplace of meridian therapies that negative emotions are held in the energy body as 'blockages' or 'restrictions' to the flow of our *Qi*/life-energy and in the physical body as deep underlying 'knots' of tension. When we dwell on or are reminded of these issues or when the background level of our *Qi* energy is increased (as it is with breathwork or hands-on healing) these issues can become activated – that is, they re-enter conscious awareness as some combination of thought, feeling, physical tension, or discomfort). This 'traditional' explanation is increasingly allowed to 'lay alongside' western notions within accepted academic journals – a very positive development!³¹

The growing body of new techniques gathered under the umbrella of 'energy psychology'³² or 'meridian therapy' (e.g. Emotional Freedom Techniques, Tapas Acupressure Technique) continue to demonstrate the fastest, most complete resolution of specific emotional issues. This tradition continues to break new ground in terms of the non-pharmacological speed and effectiveness of treatment (in our practice we are seeing resolution rates of around 90%). They have even proved themselves effective with the most severe and intractable of anxiety disorders (e.g. PTSD^{33,34}). In our own practice we have experienced several cases of the recovery and complete *in situ* integration of both

³¹ Feinstein, David & Church, Dawson 'Modulating Gene Expression through Psychotherapy: The Contribution of Non-Invasive Somatic Interventions' *Review of General Psychology*, December 2010, American Psychological Association (forthcoming)

³² Gallo, F. P. (2005). *Energy psychology: Explorations at the interface of energy, cognition, behavior, and health*

³³ Church, D. Geronilla, L. & Dinter, I. 'Psychological Symptom Change in Veterans after Six Sessions of Emotional Freedom Techniques (EFT): An Observational Study' *The International Journal of Healing & Caring*, Volume 9, Number 1, December 2009

³⁴ Church, D. 'The Treatment of Combat Trauma in Veterans Using EFT (Emotional Freedom Techniques): A Pilot Protocol' *Traumatology*, March 2010, Vol. 16 No. 1 55-65

fetal trauma and birth trauma using these energy psychology, meridian based techniques without breathwork.

Rebirthing & the meridian therapy – are not competitors

The limiting factor of the new meridian therapies is that they require a clear and present emotional focus to be maintained on each and every aspect of the problem in order to produce good results.

Rebirthing breathwork is far more ‘exploratory’ and wide-ranging, and this is its great strength. It is useful when our malaise is less specific and more generalized, when we feel blocked, stuck, or that our life has somehow ‘stalled’; when we do not know which way to go or lack the courage and confidence to undertake the necessary change. On the other hand, when people have a specific well-defined emotional pain, meridian therapies (energy psychology techniques) offer the speediest, most effective, and so most humane, opportunity for relief.

The recognition that we are dealing with a modality in the same tradition and underpinned by the same energy anatomy model can facilitate the emergence of a new consensus on breathwork, one that is both theoretically consistent and in line with our shared experience. With the emergence of such a consensus research can then be directed to understand the basis for the profound change and transformation that undoubtedly characterizes it.

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