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SCEPTICISM ABOUT ‘REVOLUTIONARY TREATMENTS’

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The mystery of theta

I have just been reading about yet another form of therapy. It's called ThetaHealing® and is promoted as 'a meditation training technique utilizing a spiritual philosophy for improvement and evolvement of mind, body and spirit'. The ThetaHealing® website (*note 1*) further describes how it 'focuses on thought and prayer' and 'teaches how to put to use our natural intuition, relying upon unconditional love of Creator Of All That Is to do the actual "work"'. During the meditation sessions healer and client are presumed to enter a 'theta state' characterised by an abundance of theta waves in their electroencephalographic (EEG) frequency spectra. The claim is made that 'by changing your brain wave cycle to include the "Theta" state, you can actually watch the Creator Of All That Is create instantaneous physical and emotional healing'.

'Theta' refers to frequency components in the 4–7 Hz range. There are two sources of theta rhythm in the human brain and the one referred to here is cortical theta, which is associated with drowsiness and certain meditative states. Judging from the testimonials on the ThetaHealing® website, its healing properties are boundless.

The creator of ThetaHealing® is Vianna Stibal, 'a world renowned spiritual teacher/ healer'. Another of this woman's claim to fame is that several years ago she was found guilty of fraud by an Idaho court and was made to pay \$100,000 in punitive damages.

There is no scientific evidence to support the theory or efficacy of ThetaHealing®. A small study, reported in an alternative medicine journal, found that during the healing sessions 'theta frequency band did not increase in healers or in clients. Rather, the contrary was found, with a significant decrease in theta-2 band during healing in healers' (*note 2*).

Biofeedback

Reading about ThetaHealing® reminded me of the excitement generated by biofeedback in the 70s and 80s. Treatment by biofeedback is based on the idea that amelioration of a range of medical and psychological conditions can be effected by training patients to control the autonomic nervous system activity associated with their particular problem. Physiological responses that are commonly targeted include palmar sweating (via skin resistance), blood pressure, vasodilation (usually by hand-warming), heart rate, and muscular tension. During sessions of biofeedback, patients monitor the targeted activity; their awareness of any change in the desired direction constitutes positive reinforcement. Conditions treated by these methods include anxiety, hypertension, migraine, tension headaches, and Reynaud's disease.

Quite early on, EEG biofeedback generated much interest, although there was also an equal amount of scepticism as to what monitoring one's EEG rhythms could achieve. This did not restrain some individuals (notably on the US west coast) from making extraordinary claims about its psychological and spiritual benefits. There was a particular fetish for the alpha rhythm; it was claimed that by 'entering "an alpha state"' one was capable of a range of paranormal and transcendental abilities and experiences. In the US, group sessions of alpha biofeedback training used to be held in special places

called 'alpha temples'. Theta feedback was less commonly used, but when spoken of at all it was endowed with even more mysterious qualities.

During this time, biofeedback was widely promoted as having the potential to revolutionise the treatment of an extensive range of common medical and psychological disorders (*note 3*). But doubts soon emerged about the procedure's clinical efficacy and whether any genuine beneficial effects were not simply due to a general relaxation response that could be achieved without using any equipment. There was also a disconcerting tendency for studies to report that clinical outcome correlated poorly with the patients' success in altering the targeted physiological activity.

When all the dust has settled on a new treatment that is initially hyped as some kind of revolutionary break-through, it usually takes its place, if there is to be one at all, amongst all the existing treatments, though without fulfilling its early promise. The place now occupied by biofeedback is very much on the fringes of medicine; in the UK at least, I don't think there can be many NHS clinics where it is on offer. The same can be said for what is now known as neurofeedback. I can't imagine that either will be making much of a comeback.

The Edinburgh Masker

While we are on the subject, whatever happened to the Edinburgh Masker? No, this wasn't some notorious person who prowled the streets of the capital. The Edinburgh Masker is a simple device that can have an immediate and dramatic effect on stammering. It has been known for centuries that people who habitually stammer are much more fluent when they are unable to hear their own voice (hence the Greek orator and statesman, Demosthenes, is said to have practised his speeches standing near the roar of the sea). The Edinburgh Masker consists of a small portable noise generator, a throat microphone, and a pair of headphones. While you are wearing this device and it is turned on, whenever you speak the noise generator is triggered by activity of your vocal cords, thus preventing you from hearing your voice (or anything else for that matter). The noise stops when you cease speaking.

The instrument was developed by speech therapists at Edinburgh University in the 1970s. It featured on a television documentary at the time; the improvement in fluency of stammerers when they turned their masker on was astonishing and the improvement was often maintained for some time after the device was turned off. The media were greatly impressed and the masker was understandably heralded as a breakthrough in the treatment of stammering.

At that time I was working in a hospital clinical psychology department and was attempting to treat a person ('J') with a stammer under the supervision of someone who had specialised in this problem. J saw the TV documentary and asked me if it would be possible for him to try this procedure. I thought this a reasonable request, particularly as I imagined that the instrument could well become the treatment of choice for many stammerers. I therefore went up to Edinburgh University, did the training, and became a registered user. My department purchased the instrument (one non-portable, for use in the clinic, and one portable for use by the client). I have to say that, despite much persistence by J and myself and although its efficacy has been clearly demonstrated by clinical trials and convincing personal testimonials, J did not take to this device and we eventually gave up on it, although it remained available to any other person referred to the department.

The Edinburgh Masker did *not* become the treatment of choice and ceased to be available in the 1990s. There have been other types of feedback devices since and, rather than being accepted as *the* treatment of choice for stammering, these have taken their place amongst the range of techniques used by speech and language therapists.

Here's a couple of telling anecdotes. Quite some time ago I was listening to a radio programme in which some commentators (of 'the chattering classes') were discussing various matters and one of

them told the story of how he went to see an old school friend who, as a youngster had a severe stammer. The friend still stammered but was now using an auditory masker. A recording was played of this person speaking without the masker and then with it turned on. The difference was dramatic. One of the other commentators said something to the effect that psychiatrists and psychoanalysts had 'a lot to answer for' for treating stammering as a psychological problem when it had now been demonstrated that it could be eliminated by 'a simple physiological device'. I think that speech and language therapists would say that it's not really as straightforward as that.

Now fast-forward 20 years or so. I am reading a newspaper article about a man who devised a behavioural treatment programme to ameliorate his stammer and is now successfully using this to help other stammerers. The article lists all the unsuccessful treatments this man has had in the past, including 'a machine that made a loud noise in his ears every time he spoke!' (The exclamation mark was in the original piece, presumably to convey a mocking tone.)

Depression and 'the inflamed mind'

Still in relation to this theme, a book was published last year titled *The Inflamed Mind: A Radical New Approach to Depression* (London: Short Books). The author is Professor Edward Bullmore of the University of Cambridge and he makes a strong case for the role of immunology in clinical depression. Hence, 'depression is not all in the mind' and in a significant number of cases may be associated with 'inflammation of the brain' and therefore treatable by anti-inflammatory medication.

Professor Bullmore's book and his thesis received immediate acclaim by the media and have been described as a revolutionary approach to understanding and treating depression. I read the book and it's certainly exciting stuff. But there was more than a whiff of jealousy and confirmation bias in the author's account. Maybe unfairly, I could not help thinking, 'Here we go again' and it was helpful to read a critical (maybe overly so) analysis by an informed reviewer (*note 4*).

Maybe Professor Bullmore's inflammatory approach *will* overtake the current combined neuro-physiological and psychological approach to understanding and treating depression. More likely, I suspect, it will find a useful but more limited niche.

Notes

1. <https://www.thetahealing.com>
2. <http://tinyurl.com/y54sb2c7>
3. Brown, B. (1974) *New Mind, New Body: Bio Feedback: New Directions for the Mind*. New York: Bantam Books.
4. <http://tinyurl.com/y3mhmao3>