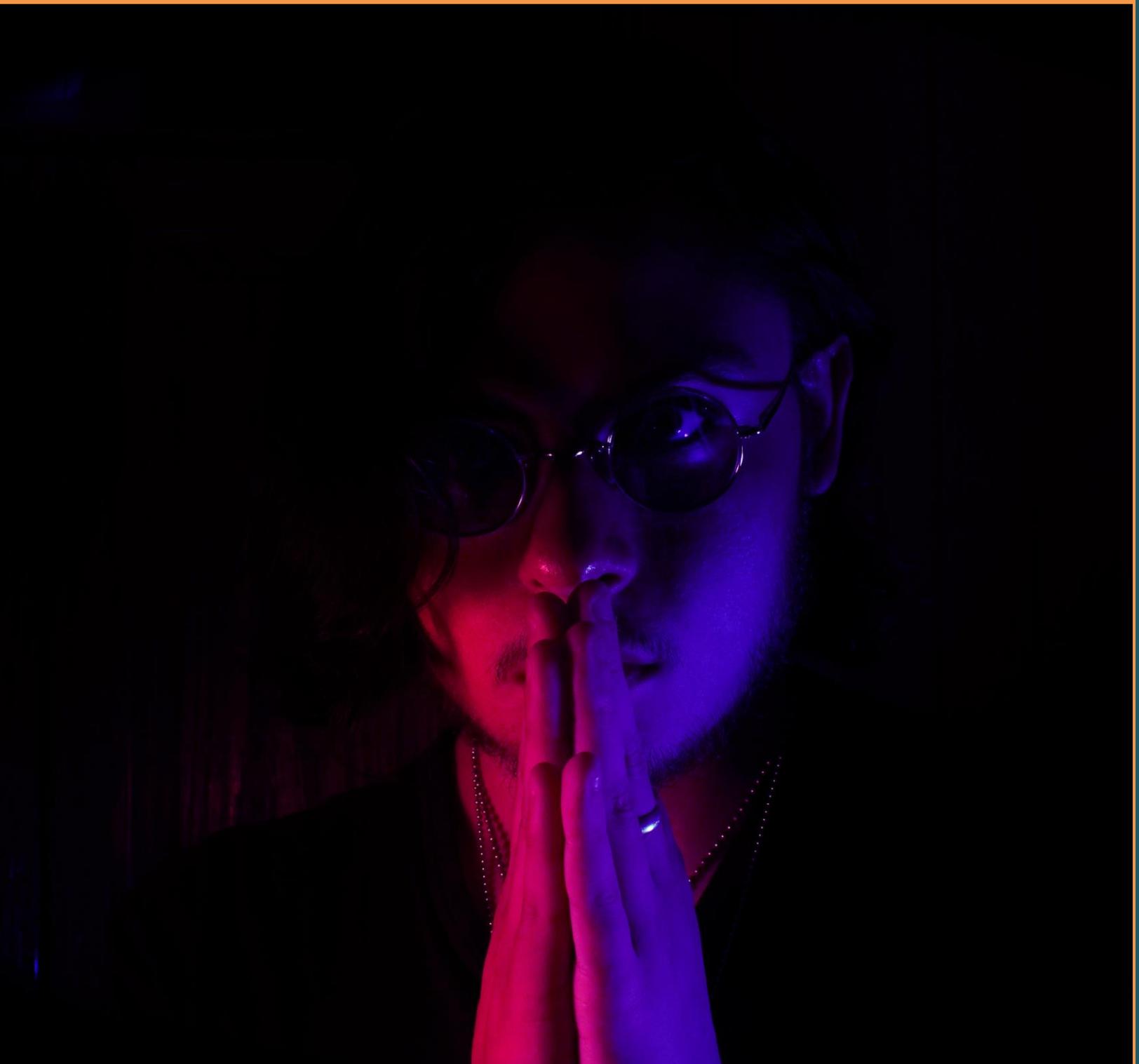


NEUROPSYCHOTHERAPY

Issue 36 March – April 2016



From The Editor

Welcome to this edition of Neuropsychotherapy.

Light Therapy

In this edition, Dr Adolf Deppe explores the effects of light therapy linked with the core principles of Neuroscience. The role of light therapy as essential bottom-up approach resonates well with neurobiology and is well established as a therapeutic modality.

Adolf also contributed a chapter to the Book: Neuropsychotherapy, Theoretical Underpinnings and Clinical Applications (Rossouw 2014).

Links with Central Queensland University.

Recently, I was honoured by an appointment as specialist Adjunct Professor in Brain-Based Education by the School of Education of Central Queensland University. This is indeed a huge recognition of the impact of applied brain based work that was established in the last decade in Australia. I am in the process of developing a series of graduate certificates (on Master's level) in brain-based education that will evolve into a Master of Education Degree (Specialization Brain Based Education). These courses are developed in collaboration with Prof Ken Purnell from the School of Education at CQU. An Expression of Interest in the courses will be in the next edition.

Workshops 2016

The Neuropsychotherapy workshops for 2016 is progressing very well.

There are also some Neuropsychotherapy workshops that will be facilitated by invitation this semester:

Hi Performance Sport New Zealand, Compass New Zealand, Zuchi Newcastle, ACT Dept Education, Qld Dept Health, APS Cairns, Brisbane Catholic Education, NSW School Counsellors and Hunter Region School Counsellors.

The first of our Certificate in Clinical Neuropsychotherapy Practitioner Trainings is coming up soon – Brisbane 31 May-3 June. Unfortunately, this workshop is fully booked. The next Brisbane based workshop will be in March 2017 and is already filling up. We are almost to capacity for the Bali workshop 13-16 June as is the case for the Melbourne workshop 7-10 September. There are still spots available for the Perth (26-29 Oct), Sydney (8-11 Nov) and Adelaide (30 Nov -3 Dec) workshops.

Enjoy the read!

Pieter Rossouw



Phototherapy and sound in Neuropsychotherapy

Adolf H Deppe – D.Litt. et Phil. – South Africa

*Dr Adolf Deppe worked for many years as a military and organisational psychologist and then digressed into education, forensics and psychotherapy. For the past twenty years he has been fascinated by the effects of light on the brain and behaviour and wrote a book on this subject, *Therapy and Light*, in which he explores the psychotherapeutic potential of the electromagnetic spectrum. He is now semi-retired and has a part-time clinical practice in Victoria.*

The significant contribution to the practice of psychology in general and to Neuropsychotherapy by the Mediros team under the guidance of Prof Pieter Rossouw in particular, is acknowledged. I will argue that additionally light and sound are therapeutic modalities that have not yet been given their due recognition even though they fit well into the general neuropsychological and neuropsychotherapeutic frameworks. Light and sound impinge on the sense organs where they are converted to electrical potentials, entering the networks of the brain to inform, heal or damage according to how they facilitate or impair brain function.

In this relatively brief paper I intend to offer some ideas for consideration. With so few researchers spending so little time on the study of the effects of light and sound on the brain, there is a dearth of meaningful data, albeit a lot of speculation and “new age” speak. The lack of data does not detract from the potential value to psychology from this field of study i.e. the absence of proof does not constitute proof of absence. Having said this, I propose to show how drawing together some facts about light and sound reveal their significance for psychology. The central theme is that within the spectra of solar energy, specific light wave bands and planet earth radiation (Schumann Resonance),

there is a coalition of phenomena that reveals potential for the treatment of mental disorders. Consider the following.

The solar spectrum. The electromagnetic spectrum, issuing from the sun at 300,000 km per second, contains visible light in different wavelengths. Wavelengths are measured in nanometers, with a nanometer (Nm) being one millionth of a meter. The shortest wavelength in the spectrum consists of cosmic rays (.00001 Nm) – highly damaging to life on earth but fortunately absorbed in the upper atmosphere. Conversely the longest wavelength, of several kilometers, applies to electrical current. In the middle of the spectrum we have light, from ultraviolet down to infrared, with violet, at around 380 Nm, followed by lengthening waves as indigo, blue, turquoise, green, lemon, yellow, orange and red (around 700 Nm). Light intensity roughly fits a bell-shaped curve and *what is important to note is that the highest point of the curve is in the yellow-green (i.e. lemon) part of the curve.* This paragraph contains simplifications, for example ultraviolet light (100-380 Nm) is “seen” in the sense that it causes iris constriction, even though it is not visibly perceived. Infrared light is also not seen by the eye but it penetrates the skull to cause healing (treatment of

acquired brain injury (ABI) and stroke (see Hamblin, 2006 and Hashmi, 2010) or damage, by causing dangerous blood pressure increases in high doses (Deppe, 2015).

The eye. Light enters the eye through the cornea and lens and falls on the retina on the back of the eyeball. Cone and rod receptors on the retina respond to light – cones respond to colour waves and rods to shades of white light. A key fact here is that the *cone (photopic) receptors collectively are most sensitive to the yellow-green part of the solar spectrum*. One may surmise that the match between peaks of solar output and photopic sensitivity is a phenomenon driven by evolutionary development of the eye, for the purpose of providing optimal photocurrent (light energy) to the organism.

The Schumann Resonance. At any one point in time there are estimated to be around 2000 lightning strikes on earth. This creates electromagnetic waves, called the Schumann Resonance, that oscillate between the planet surface and the ionosphere, travelling around the globe at the speed of light. The primary Schumann Resonance has been determined to be 7.83 cycles per second (cps), except that in practice it varies between 7.5 and 10 cps, depending on the earth's topography and slight shifts in the altitude of the ionosphere. Given the known relationship between frequency (cps or Herz) and wavelength (Nm), Fiorenza (2003) calculated the wavelength of the *Schumann Resonance to be 501 Nm which falls [you guessed it] on the colour lemon*. The Schumann Resonance has harmonics at intervals of 5.9 cps, all of which prompted Fiorenza (2003) to state that "Planetary harmonics govern natural long-term biological growth patterns, monthly and yearly biological processes, and daily brain and psychophysiological

function." Further, Fiorenza (2003) claims we receive the resonance signals via the spinal column and cranial structures and that it transmits to the pineal gland, the hypothalamus and finally to the pituitary gland. He also makes the point that the resonances may interfere with inter-cellular light transmission (see Deppe, 2013 for more detail on cellular emissions of light). The Schumann Resonance has been present throughout human evolution and it seems reasonable to assume that it was instrumental in shaping the development of the human brain.

Brain waves. The brain wave frequencies – gamma (40-100 cps), beta (12-40 cps), alpha (8-12 cps), theta (4-8 cps) and delta (4-8 cps) – are well known to the majority of psychologists. The Schumann frequency of around 8 cps falls on the cusp of alpha and theta and is theoretically associated with relaxation and creativity. The question arises, does the preponderance of man-made radiation interfere with the effect of the Schumann Resonance and to what extent, and what are the impacts on psychological functioning? There are also questions about the possible relationships between interference of brain wave frequencies and the development of depression, anxiety, autism, ADHD and other psychological unwellness.

Sound. The idea has been mooted that sound and light cannot be equated as stimuli because light is a radiation form and sound is a compression wave. This distinction lacks relevance because both forms of stimulation, at the point of biological reception, are converted into intra-brain electrical processing. Sound can therefore be used therapeutically, as for example in binaural beat technology, brain entrainment and accelerated learning programs. In addition, there is a growing interest in the use of music in the treatment of depression, anxiety and dementia to which a recent ABC program alluded (Newby, 2016).

Therapy outcomes.

I have shown that phototherapy significantly alleviates depression and anxiety (described in Deppe, 2013), and have theorised that this occurs as the result of neural stimulation by the presentation of pulsed coloured light sequentially from one end of the visible spectrum to the other. What many researchers do (e.g. Breiling, 1996) is to treat depression with pulsed red light and anxiety with blue light, with successful outcomes. Dinshah Ghadiali, who developed an extensive system of treatment of mainly physical ailments with coloured light (Dinshah, 1997), referred to lemon as the basic treatment colour for all chronic ailments (and turquoise as the treatment colour for acute ailments). Did he recognise a pivotal role of lemon in healing? He gave no indication.

General comments.

The aim of this brief paper is to show that light and sound are appropriate subject matters for neuropsychology and neuropsychotherapy. Both light and sound manifest as electrochemical energies within the brain. To reduce the dearth of data in this field of study, some of the pertinent points which demand further scientific enquiry are summarised below:

- The potential of applying brain entrainment with light and/or sound to treat psychological disorders.
- The use of key evolutionary factors (Schumann Resonances and the colour lemon) in psychological treatment.
- The review of the treatment outcomes of phototherapy for psychological unwellness.

- The comparison of outcomes of phototherapy for psychological treatment – pulsing versus constant light.
- Tracking biological markers (e.g. blood pressure) subsequent to phototherapy.

References

- Breiling, B (Ed.) (1996). *Light years ahead: The illustrated guide to full spectrum and colored light in mindbody healing*. Berkeley, CA: Celestial Arts
- Deppe, A H (2013). *Therapy with light: A practitioner's guide*. Houston, Texas: Strategic Book Publishing & Rights Co.
- Deppe, A H (2015). *Light therapy and blood pressure: A search for safe parameters*. (Unpublished paper)
- Dinshah, D (1997). *Let there be light* (4th Ed). Malaga: Dinshah Health Society.
- Fiorenza, N A (2003). *Planetary harmonics and neurobiological resonances*. Accessed March 2016 at <http://www.lunarplanner.com/Harmonics/planetary-harmonics.html> (unpaginated).
- Hamblin, M R (2006). *Mechanisms of low level laser therapy: Everything you ever wanted to know and more from Harvard Medical School*. Accessed March 2016 at <http://photobiology.info/Hamblin.html>
- Hashmi, J T, Huang, Y Y, Bushra Z O, Sharma, S K, Naeser, M A & Hamblin, M R (2010). Role of low level laser therapy in neurorehabilitation. *PM&R, Volume 2, Issue 12, S292–S305*. doi: 10.1016/j.pmrj.2010.10.013
- Newby, J (2016). *Music on the brain*. Catalyst, Sydney: Australian Broadcasting Corporation Accessed March 2016 at <http://www.abc.net.au/catalyst/stories/4421003.htm>

The author may be contacted via email at deppea@tpg.com.au

BOOK REVIEW

I-Power

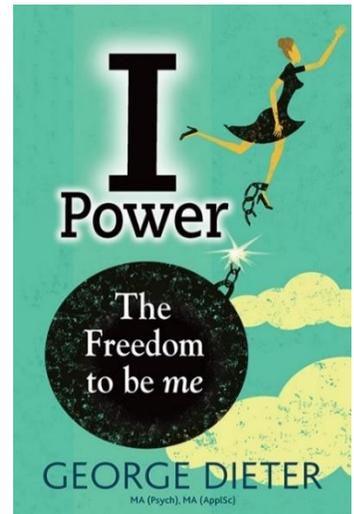
The Freedom to Be Me

George Dieter MA (Psych), MA (ApplSc)

(2015). Wollombi NSW: Exisle Publishing. 226pp.
ISBN 978-1-921966-83-5

"This book provides ... new insights in understanding conflict, relationship and ultimately self-empowerment."

*Prof Pieter J Rossouw
School of Education and Arts
Central Queensland University*



I Power: The Freedom to be Me focuses strongly upon the recognition of personal boundaries, and on the need for individuals to be in control of their own decisions. It challenges the concept of others being expected to make a person 'happy'. Instead it suggests that people can decide the affect others may have upon them, and that we are responsible for our own feelings. Developing an understanding of brain function and the various ways in which expectation can lay the foundation for what one may feel in response to situation helps the individual to identify the origin of the problems they may have in their relationships, be they personal or workplace related.

This publication is divided in to two sections. Part I, Basic Principles, contains an overview of the concept of boundaries; issues of stress and fear and an explanation of the function of the emotional brain and the manner it affects our decision making. This section provides the foundation for the reader to contemplate developing a boundary focus. Part II, Boundaries in Action, considers the origin of boundaries across various relationships; some common misconceptions; the use of boundaries in a clinical setting; and the issues that can arise in the absence of, or with poorly managed boundaries. It encourages the reader to engage in rational decision making, as opposed to pre-programmed responses with their roots in social expectations or past experience. This section explores the effects of silent,

inner speech and also offers guidance how best to relate to others who have a problem, without taking it to heart. It further offers a range of tools and strategies, which may be applied in a variety of settings.

For individuals immersed in an intense lifestyle, issues of stress, pressure and fear remain very real. As such, it behoves us to acknowledge a healthy respect for our own personal boundaries. I Power: The Freedom to be Me serves as a timely reminder of the need to not only understand but also utilise such knowledge to foster more productive relationships. This publication is easy to read and provides a range of descriptive images to highlight key concepts. It could prove a very useful tool for personal development or in assisting others to understand the significance of the content and expand their own skills accordingly.



George Dieter has a Masters degree in the psychology of coaching, a Masters degree in psychology, and a law degree. He is currently the principal psychologist at a private practice specialising in relationship, child and adolescent counselling.

George has presented papers at national and international conferences, as well as authoring a publication on issues confronting the juvenile justice system. He lives on the NSW Central Coast.



MEDIROS WORKSHOPS

2016 - Registration Form

Online registration also available at www.mediros.com.au

NAME: _____ Title _____ PH/MOBILE: _____

E-MAIL: _____

2016 WORKSHOP SCHEDULE – Presenter Prof. Pieter Rossouw Mark with X

- The Ageing Brain and Neuropsychotherapy**
Melbourne - 25 Nov 2016 - Royal Melbourne Hospital, Grattan Street, Parkville _____
- The Brain & Anxiety: Neurobiological information as Psychotherapeutic Tool**
Brisbane - 14 & 15 April 2016 - RBW Hospital, Herston Rd, Herston, Brisbane _____
- The Brain and Management of Pain**
Sydney - 27 May 2016 - Portside Centre, 207 Kent Street, Sydney _____
- The Brain and Management of Pain**
Brisbane - 18 Nov 2016 - RBW Hospital, Herston Rd, Herston, Brisbane _____
- Developing Brain and the Neuroscience of Memory and Trauma**
Brisbane - 01 & 02 Sept 2016 - RBW Hospital, Herston Rd, Herston, Brisbane _____
- The Adolescent Brain – Utilizing Neurobiological Information to Enhance Mental Health and Learning**
Melbourne - 14 & 15 Jul 2016 - Royal Melbourne Hospital, Grattan Street, Parkville _____
- The Adolescent Brain – Utilizing Neurobiological Information to Enhance Mental Health and Learning**
Sydney - 28 & 29 Jul 2016 - Portside Centre, 207 Kent Street, Sydney _____
- The Neuroscience of Depression: New opportunities for Effective Treatment**
Sydney - 22 & 23 Sept 2016 - Portside Centre, 207 Kent Street, Sydney _____

COST

<u>TWO DAY WORKSHOPS</u>	Please Tick
Early Bird rate (60 days prior)	\$ 615.00 _____
Standard Rate	\$ 695.00 _____
Student rate (copy of st card)	\$ 595.00 _____
Previous Workshop attendees & Group (4+, one payment)	\$ 595.00 _____

<u>ONE DAY WORKSHOPS</u>	
Early Bird rate (60 days prior)	\$ 435.00 _____
Standard Rate	\$ 495.00 _____
Student rate (copy of st card)	\$ 395.00 _____
Previous Workshop attendees & Group (4+, one payment)	\$ 395.00 _____

TOTAL COSTS: _____

PAYMENT OPTIONS

CREDIT CARD (Visa of Master only)

Card Number: _____

Expiry Date: _____ Three digits on back of card _____

Name of Card: _____

Amount: _____ Signed: _____

Cheque - Made out to Mediros Pty Ltd

Bank Transfer - You will receive the invoice & Mediros bank details via email

Email to: andie@mediros.com.au OR admin@mediros.com.au
Fax: 07 3294 3220
Mail: Mediros (Admin), PO Box 6460, St Lucia, Qld, 4067
Phone Number: 07 3217 72



Neuropsychotherapy Training Certificate of Practice 2016/7

Presenter – Prof. Pieter Rossouw

Registration Form

Online registration also available at www.mediros.com.au

Workshop attendance – 21 hours (3½ days). Certificate of attendance provided for 21 CPD Hours

NAME: _____ Title _____ PH/MOBILE: _____

E-MAIL: _____

VENUE AND DATE

Mark with X

Brisbane	2016 FULLY BOOKED	2017, 7-10 March RBW Hospital, Herston Rd, Herston, Brisbane	<input type="checkbox"/>
Sydney	08 – 11 Nov 2016	Portside Centre, Level 5, 207 Kent Street, Sydney	<input type="checkbox"/>
Melbourne	07 – 10 Sept 2016	Royal Melbourne Hospital, Grattan Street, Parkville	<input type="checkbox"/>
Perth	26 – 29 Oct 2016	St Catherine's College, Uni WA, 2 Park Rd, Nedlands, Perth	<input type="checkbox"/>
Adelaide	30 Nov – 3 Dec 2016	Education Centre, 4 Milner St, Hindmarsh, Adelaide	<input type="checkbox"/>
Bali	13 June – 16 June 2016	Courtyard by Marriott, Bali, Seminyak	<input type="checkbox"/>
Auckland NZ	1 March – 4 March 2017	Waipuna Conference Centre, Auckland, New Zealand	<input type="checkbox"/>

PRICING FOR ALL VENUES ARE THE SAME - INCLUDING THE BALI VENUE - Training fee only - excluding travel and accommodation costs

Payments can be made in instalments

Early Bird rate (60 days prior)	AUD \$ 1 395.00
Standard Rate	AUD \$ 1 495.00
Student rate (copy of student card)	AUD \$ 1 350.00
Groups (4+ attendees per group, one payment)	AUD \$ 1 350.00

PAYMENT OPTIONS

___ CREDIT CARD (Visa or Master Card only)

Card Number: _____ Expiry Date: _____

Three digits on back of card _____ Amount: _____

Name of Card: _____ Signed: _____

___ CHEQUE - Made out to Mediros Pty Ltd

___ BANK TRANSFER - You will receive the invoice & Mediros bank details via email

Email to: office@mediros.com.au OR admin@mediros.com.au Fax: 07 3294 3220
Mail: Mediros (Admin), PO Box 6460, St Lucia, Qld, 4067



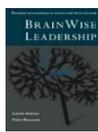
Neuropsychotherapy Products - Order Form

NAME: _____ Title _____ PH/MOBILE: _____

FULL MAILING ADDRESS: _____
_____ Post code _____

E-MAIL: _____

Please Tick



BrainWise Leadership: Practical neuroscience to survive and thrive at work
by Dr C Henson and Dr Pieter J. Rossouw
268 pages 2013

\$ 35.00



Neuropsychotherapy: Theoretical Underpinnings and Clinical Applications
by Dr Pieter J. Rossouw
457 pages 2014

\$ 59.00



Think Lean Method: The whole-brain guide to get lean for life
by Jurie G. Rossouw
242 pages 2015

\$ 55.00



Think Lean Fast: Healthy Living for Busy People
by Jurie G. Rossouw
102 pages 2015

\$ 49.00



MiBrain Neuroscience Animation Series© Six animations - USB Format
*How the Brain Develops, *The Brain and Panic, *Depression and the Brain,
*OCD and the Brain, *Sleep and the Brain, *How the Brain Develops – Mandarin version
by Dr Pieter Rossouw

\$ 39.00

TOTAL AMOUNT ----- _____

PAYMENT OPTIONS

CREDIT CARD (Visa or Master Card only)

Card Number: _____ Expiry Date: _____ Three digits on back of card _____

Amount: _____ Name of Card: _____ Signed: _____

CHEQUE - Made out to Mediros Pty Ltd

BANK TRANSFER - You will receive the invoice & Mediros bank details via email

Email to: admin@mediros.com.au

Fax: 07 3294 3220

Mail: Mediros (Admin), PO Box 6460, St Lucia, Qld, 4067