

# NEUROPSYCHOTHERAPY IN AUSTRALIA

## **The Social Brain & Education**

Issue 25 January-February 2014



## Editorial

### Neuropsychotherapy 2014.

Welcome to the first edition of Neuropsychotherapy in Australia for 2014! We are very pleased to notice the growth of our readers from a couple of hundred in 2011 to the current number – well over 3000. What is more encouraging is the growing interest in applied brain based therapies – Neuropsychotherapy on a global level. We have subscribers from nearly every continent. It underlines how the internet facilitates a truly new global village for clinicians who share similar interests. You are also encouraged to mail the link to the journal to your colleagues and invite them to register. Previous editions are available on the website (no cost of course).



**Dr Pieter Rossouw**

### Neuroscience and Education



The results of the global survey on education by the Organization for Economic Co-Operation and Development was published late 2013. The 5th report – the 2012 Programme for International Student Assessment report (PISA) is based on the results 510 000 students from 65 countries between the ages of 15 years 3 months and 16 years 2 months of age representing 28 million 15-year old students globally and 80% of the world economy. The report attracts significant interest and is often referred to as a benchmark for countries as to their education system and how it rates and compares with other countries. The students are tested in reading, mathematics and science.

The survey has been conducted every three years since 2000. The latest report indicates that Australia is slipping behind in all three areas and as a result many critical comments are made – mostly indicating the need for increased funding to address the “problem”.

Unfortunately the report is lacking on important perspectives – the role of the environment on the developing brain, the fact that not all memory systems are equally beneficial to future applications (versus repetition ability), the lack of discrimination between fear based learning and learning in enriched environments. The feature article explores these issues and considers implications.

### Neuropsychotherapy workshops

The Mediros neuropsychotherapy workshops for 2014 will commence in a few months.

Due to invites to lecture in New Zealand, South Africa, the USA, France and China during 2014, we had to limit the number of workshops for Australia.



## 2 day workshops

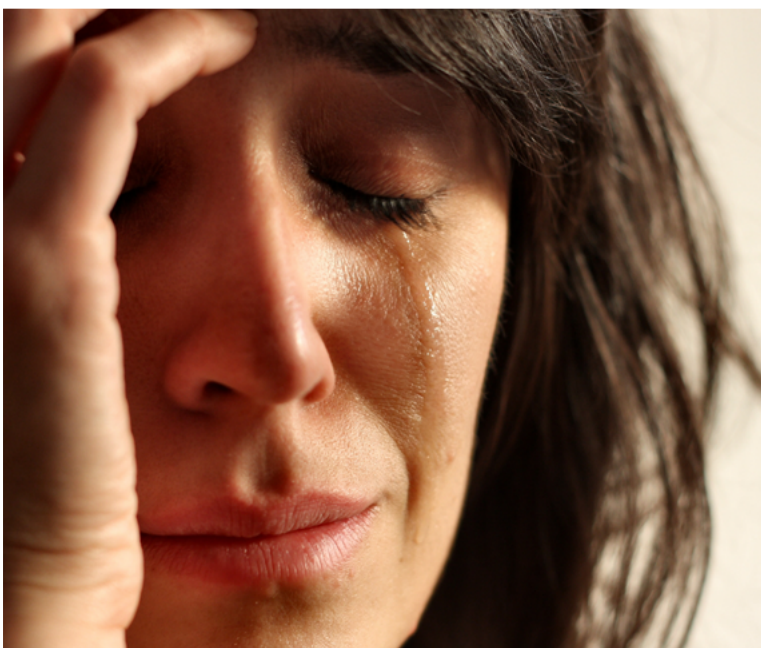
- The 2-day workshop on the Brain and Anxiety will run only in Melbourne (June);
- The 2-day workshop on the Neuroscience of Depression will only run in Sydney (May)
- The 2-day workshop on the Developing Brain, Memory and trauma will only run in Brisbane (June)
- The 2-day workshop on the Social Brain and the Neuroscience of relationships will run in Melbourne, Sydney and Brisbane.

## New Workshop – The Ageing (maturing) Brain

Our new (1-day) workshop for 2014 is the Ageing Brain – Maximizing wellness and managing challenges: A Neuropsychotherapeutic perspective. This workshop focuses on the mature brain (25 years +) - how it maintains effective processes, how it is compromised due to genetic, and environmental (lifestyle) factors and how to manage and maximise wellness. Many early registrations indicate significant interest in this workshop. This workshop will run in Melbourne, Sydney, Brisbane, Canberra, Adelaide and Perth.



## New Workshop – The Brain and Persistent Pain



We are very excited to announce another new 2-day workshop for 2014. The workshop: The brain and Persistent Pain: From Neuroscience to Practical Strategies for Effective Treatment. It will run in collaboration between me and pain experts physiotherapist Steve McCrea and clinical psychologist Rachel Kovacevic. This is an exciting workshop bringing key disciplines together to understand and treat persistent pain.

The workshop will run in Sydney, Melbourne, Brisbane, Canberra and Perth.

Information regarding all the workshops is provided in this journal. More information regarding the workshop content cost, registrations etc. is available on the website [www.mediros.com.au](http://www.mediros.com.au)

I hope you will enjoy the read.

*Pieter Rossouw*



# THE SOCIAL BRAIN AND EDUCATION

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There is a growing interest in the link between the developing brain and maximizing outcomes in schools. Recent research outcomes in many western countries indicate that students tend to fall behind on global scales in terms of ranking. Every three years since 2000 the Organization for Economic Co-Operation and Development have provided a report on the rankings of knowledge of 15 year-olds. The 5th report – the 2012 Programme for International Student Assessment report (PISA) was released late 2013 (OECD 2013). This report is based on the results 510 000 students from 65 countries between the ages of 15 years 3 months and 16 years 2 months of age representing 28 million 15-year old students globally and 80% of the world economy. Demographic information was collected through questions to students and their school principals regarding the student's background, the school, the learning environment and school systems.

## SOME OF THE FINDINGS ARE:

- “Shanghai-China has the highest scores in mathematics, with a mean score of 613 points – 119 points, or the equivalent of nearly three years of schooling, above the OECD average. Singapore, Hong Kong-China, Chinese Taipei, Korea, Macao-China, Japan, Liechtenstein, Switzerland and the Netherlands, in descending order of their scores, round out the top ten performers in mathematics.
- Of the 64 countries and economies with trend data between 2003 and 2012, 25 improved in mathematics performance.
- On average across OECD countries, 13% of students are top performers in mathematics (Level 5 or 6). They can develop and work with models for complex situations, and work strategically using broad, well developed thinking and reasoning skills. The partner economy Shanghai China has the largest proportion of students performing at Level 5 or 6 (55%), followed by Singapore (40%), Chinese Taipei (37%) and Hong Kong China (34%). At the same time, 23% of students in OECD countries, and 32% of students in all participating countries and economies, did not reach the baseline Level 2 in the PISA mathematics assessment. At that level, students can extract relevant information from a single source and can use basic algorithms, formulae, procedures or conventions to solve problems involving whole numbers.
- Between 2003 and 2012, Italy, Poland and Portugal increased their shares of top performers and simultaneously reduced their share of low performers in mathematics.
- Boys perform better than girls in mathematics in only 38 out of the 65 countries and economies that participated in PISA 2012, and girls outperform boys in five countries.
- Shanghai-China, Hong Kong-China, Singapore, Japan and Korea are the five highest-performing countries and economies in reading in PISA 2012.
- Of the 64 countries and economies with comparable data throughout their participation in PISA, 32 improved their reading performance.
- On average across OECD countries, 8% of students are top performers in reading (Level 5 or 6). These students can handle texts that are unfamiliar in either form or content and

can conduct fine-grained analyses of texts. Shanghai China has the largest proportion of top performers – 25% – among all participating countries and economies. More than 15% of students in Hong Kong China, Japan and Singapore are top performers in reading as are more than 10% of students in Australia, Belgium, Canada, Finland, France, Ireland, Korea, Liechtenstein, New Zealand, Norway, Poland and Chinese Taipei.

- Between the 2000 and 2012 PISA assessments, Albania, Israel and Poland increased their shares of top performers and simultaneously reduced their shares of low performers in reading.
- Between 2000 and 2012 the gender gap in reading performance – favouring girls – widened in 11 countries.
- Shanghai-China, Hong Kong-China, Singapore, Japan and Finland are the top five performers in science in PISA 2012.
- Between 2006 and 2012, Italy, Poland and Qatar, and between 2009 and 2012, Estonia, Israel and Singapore increased their shares of top performers and simultaneously reduced their shares of low performers in science.
- Across OECD countries, 8% of students are top performers in science (Level 5 or 6). These students can identify, explain and apply scientific knowledge and knowledge about science in a variety of complex life situations.” (OECD 2013)

Although not without significant levels of criticism (small scope of the study, types of questioning, philosophical changes in reading, reasoning and the understanding of “utilizing” skills etc.), the impact of this study is significant for policy makers, educators and government systems. The effect of results like these can be significant – both positively significant as well as negatively significant.

For a country like Australia (to use one example) the PISA results are bad news. In comparison to previous results with the 65 other economies, it seems Australian school rankings have slipped further behind in reading skills (equal 12th position), science (equal 17th position) and mathematics (19th position). Best performers in terms of percentage change from the previous Reports were Qatar, Romania, Shanghai-China and Israel. The 5 top performing countries are China, Singapore, Chinese Taipei, Korea and Japan.

An analysis of annualised change in performance between 2003 and 2012 (mathematics scores) provides an important snapshot of a country's global position and direction in terms of its education system on larger platform. The Report divided the group in two subgroups –

- The countries that performed BELOW the OECD average and
- The countries that performed ABOVE the OECD average.

Of the countries below the OECD average the best performing countries were Brazil, Tunisia Mexico and Turkey with the United States and Spain demonstrating no change. Countries below the OECD average slipping behind even further were Uruguay, Hungary, Slovak Republic, Norway and Luxemburg.

Of the countries above the OECD average the best performing countries (increasing their performance even further) were Germany, Macao-China, Hong Kong-China, Korea and Japan. Countries above the OECD average that deteriorated in performance are Sweden, Finland, Czech Republic, New Zealand, Australia, Iceland, Denmark, Netherlands, Canada, France and Belgium (OECD2013).

The chapter on Australia, written by Dr Sue Thomson, director of ACER's educational monitoring and research team, identifies unique variables within the country. Students in city centres like Canberra, Sydney and Melbourne performed much better than students from rural areas like the Northern Territory. Students from wealthy backgrounds were five times more likely to perform well in comparison to students from lower socio-economic status. Students in independent schools performed significantly higher than students from public or Catholic schools. Students from Catholic schools demonstrated the largest drop in performance since the last report (OECD 2013).

The Report highlights important aspects of performance without addressing solutions. It is up to every economy, every country to consider the implications for its educational system. Sadly the global outcry in terms of a solution is a simple rhetoric: more money. As for Australia, Thomson indicates that more taxpayer dollars need to be allocated to disadvantaged schools. Although there is the factual reality that education demands commitment – commitment in terms of resources, energy, hardware and time. However education is also a science and an art – a science that needs to be well understood, constructed and executed and an art in terms of the

student-teacher relationship, the nurturing school and socio-economic environment (or the lack there of). The purpose of education needs to be well formulated, its essence clearly grasped and its outcome identified.

If the purpose of education is to be the best in Mathematics, the best in Reading and/or the best in Science then the obvious question is: "how does one define being the best in a discipline?" the next (just as challenging) question is: "how do you measure these disciplines?" and "what are we measuring – static knowledge, skills, ability to apply...?"

On top of this there is an even more pressing question – "what do we know about the learner?" Is the student an eager learner keen to apply and explore his/her world with an open attitude to question and progress further than any of us or is the student a reproducer who becomes unstuck when strict support networks discontinue and becomes anxious in the wake of challenging environments?

Reports like PISA 2012 are the outcome of an education philosophy based on the industrial model. The industrial model was (and still is in many respects) a commercially driven enterprise based on output. Although the model is commercially successful, it operates on production output like building model T Fords, washing machines or making chicken nuggets. When this model is applied to the education system we develop a benchmark of the product (gold standard) and measure all results against the standard and produce a report of who produces output above or below the standard (or in the absence of a standard – who performs best and worst in terms of the group). The subtitle of the PISA report is: "What 15-year-olds know and what they can do with what they know" (OECD2013). This is the Achilles heel of the report. It implies that by asking questions in regard to three disciplines, it can predict "what they can do with what they know". There are no assessments of the individual student's approach to life, support, sense of self and safety, happiness, social interactions (or the lack of any of the variables just mentioned). The personal qualities are totally ignored, rating responses as measures whether a country/economy performs well or not well in terms of their education. The solution offered to enhance the outcomes (more money), is an even greater cause of concern.

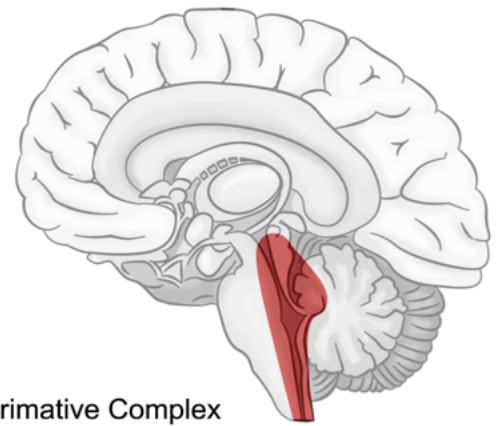


## NEUROSCIENCE THE SOCIAL BRAIN AND EDUCATION.

The brain is much more than an organ pre-scripted by its (fixed) genetic code. The spectacular failures of evil doctrines like Hitler's "Uberrasse" (Aryan race) or the generic "care" approach with the Romanian orphans post World War 2 demonstrated beyond doubt that the brain needs more than just a genetic pool. Neuroscientists, Eric Kandel (Kandel 1998, Kandel 2006, Kandel, Schwartz & Jessell 2013); Rizzolatti (Rizzolatti & Craighero 2004), Joseph LeDoux (2005), Iacoboni (2008) and many others have clearly demonstrated the role of the environment in shaping and moulding the brain. This process does not stop at any point – the brain continues to grow and change as a result of daily interactions with its environment. These daily interactions form the basis of what drives a human being to learn, integrate, explore and proliferate. Trauma, fear and risk of survival change these motivations (Rossouw 2013). These experiences do not stop development but alter development. This crucial point is often missed. Compromised environments (in opposition to enriched environments) alter the course of neural development and facilitate changes in memory systems. This does not indicate the absence of memory systems but a different direction. When performance is measured the results may seem comparable but the source (what drives the system) could be vastly different – especially in terms of long term outcomes.

- **The primitive neural complex**

The brain develops from the bottom to the top and from the inside out. The well-known model of neural development – the Triune Brain by neurologist Paul MacLean (MacLean 1990) demonstrated that the first areas of the brain that develop after conception are the very primitive systems – the systems that are responsible for survival (breathing, heart rate, the ability to procreate) – he refers to this as the reptilian brain (brain stem, pons, medulla and part of the cerebellum). We share this with all living organisms. This part of the brain is fully developed at birth. It is also fully functional. If any of these systems are compromised the entire living unit is in grave danger of not surviving.



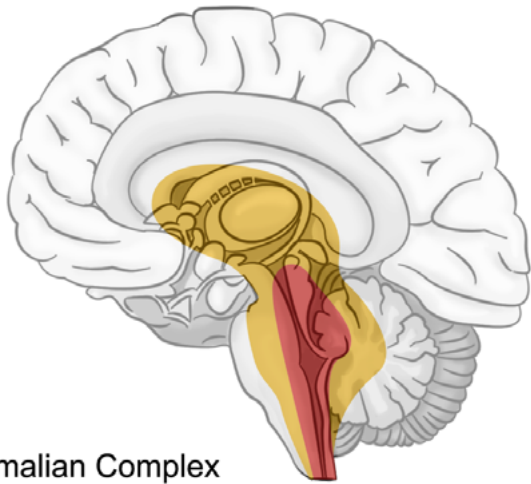
1. Reptilian/ Primitive Complex  
Physical Survival

- **The Paleomammalian brain/cortex**

The second part of the brain that develops is the mid-brain – structures below the corpus callosum. These structures – the thalamus, amygdala, hypothalamus, hippocampus (often referred to as the limbic system) and the basal ganglia are jointly responsible for the activation of patterns of sensory responses to external cues and set the trajectory of protection (the stress response). This neural section is fully developed at birth however not fully operational. The implications are significant and are closely linked to genetic expressions – the interplay between the genetic make-up and environmental impact. When the external environment provides safe, secure and manageable cues, the stress response is limited and the neural activation develops open neural activations to frontal cortical areas. Compromised environmental cues enhance the risk of neural patterns of avoidance to facilitate patterns of neural protection (MacLean 1990).

The impact is decreased social development that compromises frontal cortical activation. In both situations (enriched environments as well as compromised environments) memory systems are activated however the nature of these networks are unique in nature. Memory systems linked to threat due to threatened cues lead to fear based (closed) reactions to enhance survival. Memory systems linked to enriched environments lead to open neural patterns, increased cortical blood flow to frontal cortical areas and enhanced, ongoing problem solving capacities.

Fear based learning is learning that focuses on limbic activation. The response is nearly immediate (due to the nature of the threat – increased blood flow to limbic areas and reduction of cortical blood flow) and learning is quick. The downside is it remains a



## 2. Paleomammalian Complex

Limbic System/ Emotions

survival response and as soon as the “threat” can be avoided – it will happen (protective/survival learning). Consider a student who learns mathematics through a fear based system – he/she may perform well in the subject due to fear however as soon as they are able to choose – they drop the subject (the pattern of avoidance). On the other hand – learning that is facilitated from higher cortical regions when primitive (survival) regions are down-regulated (controlled) (Allison & Rossouw 2013).

Fear based learning (memory systems) is much more powerful than open neural activation (resulting in better performance due to the basic human need to survive). The downside is the neurochemical detriment to the system (ongoing release of stress chemicals) and long term performance deterioration, and in significant cases – apoptosis. Measuring performance (memory networks) that does not include neural patterns (limbic based or frontal cortical based activation), neurochemical activations (increased serotonin flow, norepinephrine, corticotrophin releasing factor, adrenocorticotrophin hormone, cortisol level) and long term performance and neural integration, lacks key variables to provide effective comparisons.

- **The Neomammalian brain/cortex**

Lastly the cortical regions of the brain develop. This is the largest part of the cortical mass that develops – most of its connections occur after birth. The brain continues to organise and re-organise itself as a result of information processing – from the external environment and later a complex interplay between environmental stimuli and frontal cortical processing (right and left pre frontal cortex, ante-

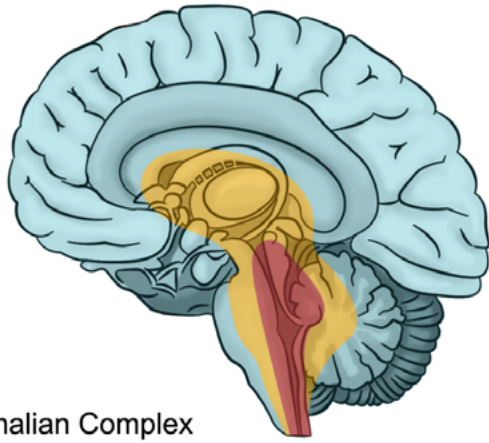
rior cingulate and orbito-frontal areas. Processing of neural pathways to the cortical (especially frontal cortical) regions happens in close collaboration with the more primitive regions (Grawe 2007). When primitive (fear based/survival) patterns are activated – the memory systems respond according to the fear based systems. When a soldier is trained to take cover as soon as he/she hears the sound of a gun then it is a survival memory system that kicks in automatically without activating the frontal cortical regions. This is a perfectly acceptable action to survive. However, when the same soldier sits in a shopping mall and a cleaner drops a bucket of water close by and the soldier dives for cover – everyone will be surprised by the behaviour – instinctive (survival based) responses are not all that helpful in enriched environments (consider people with phobias for lifts or having a panic attack because you need to cross a road). A pedagogical system that is based on fear may lead to short term good outcomes (immediate responses that are deeply ingrained) however effective applications are compromised as the response is fear based (survival focused) (Grawe 2007).

Enriched environments are environments where stress can be tolerated – the concept of controllable incongruence. Memory systems are formed when a pattern of neural activation is stimulated. New memory systems are formed when new stimuli activate new pathways. When these new pathways are stimulated, they establish incongruence to existing systems – the onset of the stress response. Stress chemicals are released – the main stress chemicals are - corticotrophin releasing factor, norepinephrine, adreno-corticotrophin hormone, adrenalin and cortisol (Barnes 2010). When the stressor is manageable, it leads to cortical activation and the formation of memory networks toward the frontal cortical systems (especially the pre-frontal cortex). This process is referred to as controllable incongruence (Allison & Rossouw 2013). When the stressor impact is significant and shifts cortical blood flow toward limbic areas, down regulates activation to frontal areas, memory systems are enhanced in fear based regions and patterns of survival (avoidance) present. This is the result of uncontrollable incongruence. Learning takes place in both cases but the processes and long term outcomes are very different.

## IMPLICATIONS

The development of the brain points towards important variables that need to be taken into account in terms of the provision and planning of effective

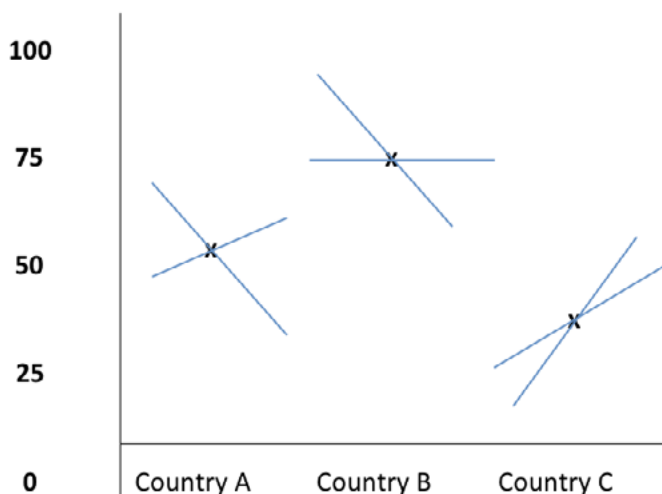




### 3. Neomammalian Complex Executive Activity

education systems. The fundamental variables are not the outcomes but the basics – the fundamental approach that facilitates a trajectory in neural development. A measurement of performance at a specific point in time (15 year-olds) in terms of mathematics, reading and science has no context in terms of an individual's (or a group's for that matter) performance over time and provides even less information of the system in which the performance is achieved (fear based or open–approach systems)

The table above describes the difficulty with single point analysis – this is the result of the scores in a subject from 3 countries. The average can be correlated to the survey 3 years ago providing information whether the average is “up” or “down”. This has some specific value. However in terms of the individual learner the score has no relevance and the tra-



jectory of “performance” can go in any direction – up down or sideways as no data is available (as the arbitrary lines indicate). Also, more importantly, there is no data as to the “driver/motivator” of the performance – whether it is fear based (driven by limbic activation and stress chemicals) or exploratory based driven by open neural activation (pre frontal cortical

activation).

Although the PISA reports have specific merit, they can by no means be the guide to address “defects” in the education system. The principles of learning and memory formation, the developing brain and basic human needs for neural proliferation and wellness are much more fundamental and provide a clearer picture in the quest to enhance wellness and maximise capacity.

#### • Indicators for wellness and capacity maximization

Let’s explore the key indicators for wellness and capacity maximization in education from a neuroscientific perspective:

##### 1. The need for a supportive teacher student relationship

This is the essential hallmark of effective education. Without the facilitation of an effective relationship (addressing the basic need for attachment in the educational environment) primitive fear based systems are not effectively down-regulated and cortical sprouting inhibited (Schenck 2011).

##### 2. The need to increase latency periods when engaging with students.

Latency is described as the period of time that lapses between when a student is given a response opportunity and when the opportunity is discontinued/interrupted. This phenomenon has been around for decades. Research indicates that smarter/more liked students are given more latency periods than less smart/liked students (Schenck 2011).

##### 3. Ask open questions rather than direct questions

Direct question up-regulate a sense of distress. Even when a teacher asks a particular student a question and the teacher is quite certain that particular student can effectively address the question, the fear response increases for other students less comfortable with the answer. Open questions, with hints and clues, increase interest, collaboration and safety (Allison & Rossouw 2013).

##### 4. Encouragement

Encouragement has significant neurobiological effects. It enhances the student teacher relationship (down regulating the primitive responses and

up-regulating cortical sprouting); it increases motivation which leads to more neural activation (rather than to give up and discontinue neural firing); motivation also increases the release of endorphins and dopamine (key neurotransmitters to assist with completion of tasks and enhance plasticity through ongoing engagement (strengthening neural patterns) (Rossouw 2013b).

## 5. Respect

Demonstration of respect has significant neural effects. It enhances a sense of survival (being accepted) and inhibits fear. It also encourages patterns of engagement and as a result facilitates neural activation to the frontal cortical areas – key to social and cognitive development (Allison & Rossouw 2013).

## 6. Enthusiasm and passion

Studies on mirror neurons have demonstrated that humans learn many skills by observation. This can be helpful or detrimental depending on the environment. In education settings the role of the teacher is pivotal to facilitate the learning environment. A teacher that demonstrates enthusiasm and teaches with passion facilitates similar responses in the student and enhances learning outcomes (Rizzolatti & Craighero 2004). Conversely the opposite is also true.

## 7. Provide an enriched environment -

The ultimate need for enhanced learning environments is to provide an enriched environment. This is much more than a physical environment that provides access to all possible (electronic) media. An enriched environment means (on physical and emotional levels) that safety needs to be present (Cozolino 2013). This means first and foremost the need for a trustworthy environment (absence of fear – bullying, violence, and the presence of emotional warmth, acceptance and a sense of belonging) (Espinoza, 2011). An enriched environment is an environment where the child can develop, laugh, play, and proliferate. It is an environment where there is a seamless collaboration between home and school (Grawe 2007).

## SUMMARY

The PISA report has significant benefits –

- it provides a snapshot of what 15-year olds know in terms of a fixed subset of items for

reading, mathematics and science;

- it provides a snapshot of what 15-year olds know in terms of this fixed subset of items in comparison to each other within countries and economies and between countries and economies;
- it provides a snapshot of what 15-year olds know in terms of this fixed subset of items in comparison to another fixed subset of items every 3 years (within and between economies and countries).

The report fails to address –

- how this information will translate to applications of the current information basis ("knowledge");
- whether the learner has obtained the information through fear based activation or an enriched environment;
- the wellness factor of neural development.

"What students know and what they can do with it" is more than a measure of information retention. The development of the brain is a social (environment experience driven) interaction that requires a close (holistic) look at the social system to be able to make predictions like "what they can do..." (Cozolino 2013). This is most likely the reason why simple solutions like "more money is needed" are doomed to fail if they are not driven by a socially responsible agenda with a clear understanding of the challenges and potential of the interactive developing brain.

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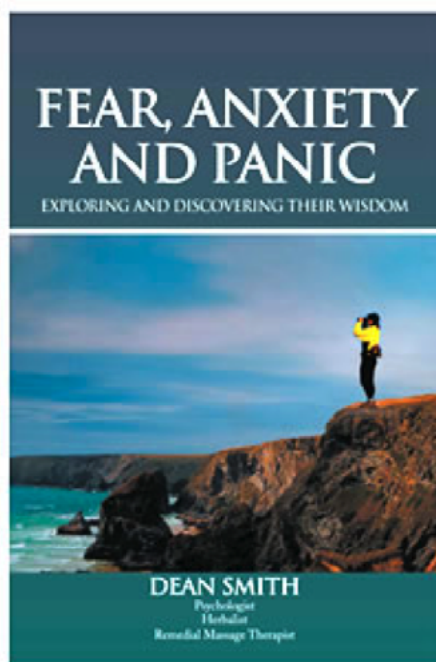
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## BOOK INTRODUCTIONS



### **Fear, Anxiety and Panic : Exploring & Discovering Their Wisdom**

**Dean Smith**

Psychologist and Psychotherapist

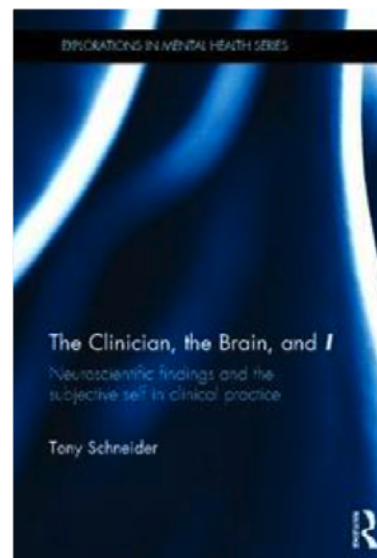
Remedial Massage Therapist

Herbalist

B.A.(Psych), Grad. Dip. Counselling, Dip. Psychotherapy, Adv. Dip. Gestalt Therapy, Dip. Clin. Hypnosis, Dip. Herbal Medicine, Cert. Rem. Massage

#### **Book summary**

At the End of his Psychology Degree, Dean found himself in a troubling situation. He had worked very hard to complete his psychology degree and desperately wanted to pursue his goal of helping others. However a stutter that he had had since the age of 3 and crippling fears and anxieties made it impossible for him to reach his goal. Dean decided to embark on a mission (that has taken 20 years) to help himself and his clients find the best ways to stop fears and anxieties controlling their lives. This book details Dean's personal struggles with fears and anxieties, along with his discoveries and finally the principles that he uses in his practice to help his clients reach their goal, live life to the fullest and stop fear and anxiety.



### **The Clinician, the Brain, and 'I'**

#### **Neuroscientific findings and the subjective self in clinical practice**

**by Tony Schneider.**

Tony Schneider is a clinical psychologist and educational psychologist working in a private practice in Western Australia.

#### **Description**

The clinician needs to make sense of many client experiences in the course of daily practice: do these experiences reflect the simple product of complex neurochemical activity, or do they represent another dynamic involving the subjective self? When research findings from the neurosciences are applied to clinical psychology, reductionist thinking is typically followed, but this creates problems for the clinical practitioner.

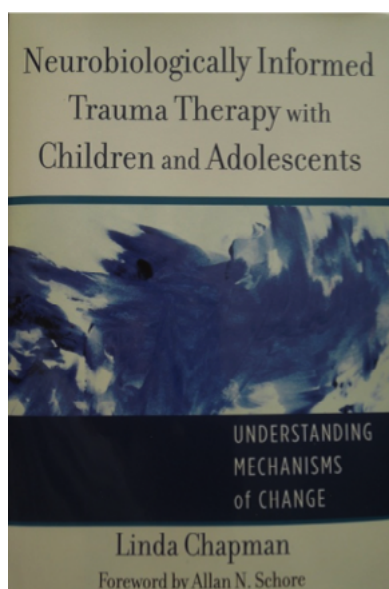
In this book Tony Schneider draws together the three strands of philosophy, neuroscience, and psychology to explore the mind/body question as it affects the clinician. Taking a position more closely aligned with dualism, he argues for the utility in making distinctions between brain activity and 'I' – the subjective self – both in general psychological functioning and in psychopathology. Schneider considers traditional psychological topics contextualized by neuroscience research and the mind/body issue, as well as applying the ideas to various areas of clinical practice. Topics include:

- the mind and body from the clinician's perspective



- fundamental aspects of the role and mechanics of the brain
- the developing self and the relationship of 'I' with the self and with others
- psychological functioning such as focus and memory, sleep and dreaming, and emotions and pain.

The idea that 'I am not my brain' will resonate with many clinicians, and is systematically argued for in clinical literature and neuropsychology research here for the first time. The book will be of particular interest to psychologists, psychiatrists, counsellors and clinicians who wish to incorporate advances in neuroscience research in the conceptualization of their clinical work, and are looking for a working model that allows them to do so.



## **Neurobiologically Informed Trauma Therapy with Children and Adolescents: Understanding Mechanisms of Change.**

**2014**

By Linda Chapman. Foreword by Allan N. Shore

LINDA CHAPMAN, MA, ART-BC, is a board-certified art therapist and founder and director of the Art Therapy Institute of the Redwoods in Northern California. Linda has published several book chapters and peer-reviewed papers, and specializes in treating severely injured and abused children and teens, as well as victims of violence.

Linda Chapman presents her unique model of treatment, Neuro-developmental Art Therapy, solidly based in neurobiology and informed by the

fields of psychiatry and trauma. Having worked as an art therapist in outpatient practice, inpatient child psychiatry, inpatient paediatric medicine, and trauma, Chapman has observed first-hand the lack of resources for the developmental of psychological assessments and the prescribing of medication before less-invasive treatments are utilized to control symptoms. This book is primarily written for the practicing clinician treating children and teens who have experienced acute and chronic exposure to child abuse, trauma, and violence. Chapman's model of treatment is grounded in the physical, psychological, and cognitive reactions children have to traumatic experiences and the consequences of those experiences. It utilizes the integrative capacity of the brain to create a self, foster insight, and produce change, with strategies based on a cutting-edge understanding of neurobiology, the development of the brain, and the storage and retrieval of traumatic memory.

This book contains theoretical as well as practical information for clinicians at any level of experience. The first chapter includes a review of the past and current literature on PTSD, while the second delves into the theory and practical applications of the Chapman Art Therapy Treatment Intervention, originally developed to reduce observable, acute PTSD symptoms in hospitalized children. Chapman then moves on to the four phases of her neuro-developmental model of treatment. Chapter 4 describes how therapists and caregivers can aid the development of infants, children, and teens with sensory processing and sensory integration difficulties.

The book then takes a careful look at the right hemisphere, exploring case material that illustrates how attachment and other early development experiences can be recreated in clinical settings, and how the integration of interpersonal neurobiology and art therapy into clinical work and achieve this goal. Right brain communication and how to recognize the non-verbal symbolic and unconscious affective processes are explored. The final chapters of the book present in-depth case studies illustrating intervention at work with children of all ages, with attention to the fluctuations of the therapeutic dyad.

Revealing how art therapy and interpersonal neurobiology can achieve breakthroughs in the clinical setting, Chapman provides invaluable knowledge and skills for treating those who are suffering and for prevention future acts of abuse and violence.

# INVITATION FOR COMMUNITY AND CLINICAL PARTICIPANTS

Peter Kyriakoulis from Melbourne is looking for participants to complete a battery of psychological tests to assist him in with his research. He is currently completing the Doctor of Philosophy in Psychology at Swinburne University, Melbourne.

In this research study, the interested is in identifying whether some of the techniques used in free diving are able to be used in the treatment of anxiety disorders, particularly panic disorder.

Participation involves completing a battery of psychological tests and a semi-structured interview to rule out psychological conditions that should take approximately 90-120 minutes to complete.

If you have any patients who suffer from panic disorder or from panic attacks that you feel may be interested in participating in the research, their contribution to this study will be invaluable.

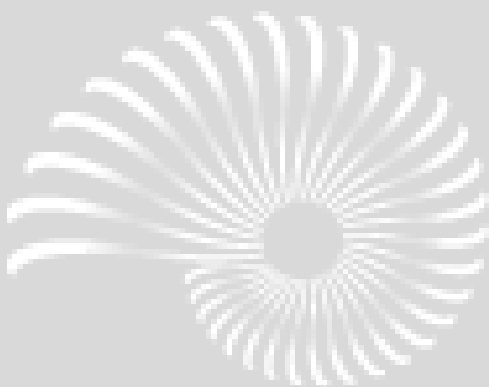
Participants can either register via the website: [www.positivepsychology.net.au](http://www.positivepsychology.net.au) or contact Peter Kyriakoulis directly on phone number: 0429 998 188

Please note that participation is completely voluntary and anonymous and participants can cease involvement at any time.

If you have any questions or comments about the study, please contact:

Prof. Michael Kyrios (Supervisor): [mkyrios@swin.edu.au](mailto:mkyrios@swin.edu.au)

Mr Peter Kyriakoulis (Researcher): [peter@positivepsychology.net.au](mailto:peter@positivepsychology.net.au)



MEDIROS  
CLINICAL SOLUTIONS





# Neuropsychotherapy workshops 2014



## NEUROPSYCHOTHERAPY

Recent findings in Neuroscience demonstrated the unique role of talking therapies as enriched environment to facilitate changes in the brain. Neuropsychotherapy is the "language" used in the interaction between the clinician and the client to guide the client in the process of restructuring the brain towards higher levels of functioning and well-being. It uses information from neurosciences to assist clients suffering from a wide range of biological, psychological and social challenges to apply strategies to down regulate unhelpful neural stress responses and up regulate neural activation towards neural change. Understanding the neurophysiology of these disorders and activation patterns of neural pathways as well as discussing practical applications, assist clinicians greatly to apply more effective strategies to treat depression, anxiety and trauma.

### WORKSHOPS

**NEW** **The Ageing Brain – Maximizing Wellness And Managing Challenges: A Neuropsychotherapeutic Perspective.**

-6 CPD HOURS

**1 November '14 Canberra**

Calvary private hospital, Mary Potter Cct, Bruce.

**8 November '14 Adelaide**

Hackney Hotel, 96 Hackney Rd, North Adelaide.

**15 November '14 Melbourne**

Royal Melbourne Hospital, Grattan Street, Parkville.

**21 November '14 Brisbane**

Education Centre, RBW Hospital, Herston.

**28 November '14 Sydney**

The Portside Conference Centre, 207 Kent Street.

**12 December '14 Perth**

St Catherine's College, Uni WA, 2 Park Rd, Nedlands.

**★ The Brain and Anxiety. Utilizing Neurobiological Information as Psychotherapeutic tool.**

-12 CPD HOURS

**6,7 June '14 Melbourne**

Royal Melbourne Hospital, Grattan Street, Parkville.

**★ The Neuroscience of Depression. New Opportunities for Effective Treatment**

-12 CPD HOURS

**29,30 May '14 Sydney**

The Portside Conference Centre, 207 Kent Street.

**★ NEW The Brain and Persistent Pain: From Neuroscience to Practical Strategies for Treatment (2day workshop with pain experts Rachel Kovacevic and Steve McCrea)**

-12 CPD HOURS

**18,19 July '14 Melbourne**

Royal Melbourne Hospital, Grattan Street, Parkville.

**8,9, August '14 Perth**

St Catherine's College, Uni WA, 2 Park Road, Nedlands.

**11,12 September '14 Sydney**

The Portside Conference Centre, 207 Kent Street.

**26,27 September '14 Canberra**

Calvary Private Hospital, Mary Potter Cct, Bruce.

**4,5 December '14 Brisbane**

Education Centre, RBWHosp, Herston.

**★ The Developing Brain and the Neuroscience of Memory and Trauma**

-12 CPD HOURS

**12, 13 June '14 Brisbane**

Education Centre, RBW Hospital, Herston.

**★ The Social Brain and the Neuroscience of Relationships**

-12 CPD HOURS

**21, 22 August '14 Sydney**

The Portside Conference Centre, 207 Kent Street.

**28, 29 August '14 Brisbane**

Education Centre, RBW Hospital, Herston.

**5,6 September '14 Melbourne**

Royal Melbourne Hospital, Grattan Street, Parkville.

### ABOUT THE PRESENTER

Dr Pieter J. Rossouw  
MAPS; MCClin; QCA.



Pieter is the Director of the Mediros Unit for Neuropsychotherapy – a company that provides training in Neurobiology and Neuropsychotherapy. He also teaches at the University of Queensland in the School of Psychology and the School of Social Work and Human Services. Currently he is involved in full time teaching and research in the fields of neurobiology and neuropsychotherapy as well as clinical training for clinicians, psychologists and general practitioners.

Pieter is a member of the Australian Psychological Society and the APS College of Clinical Psychologists. Pieter was a Professor in Clinical Psychology at in South Africa and also taught at Universities in Canada and Holland. He also spearheaded a Psycho-Therapeutic Assistance Program to support people being exposed to trauma. He provided Mental Health training for GP's for the Royal Australian College of General Practitioners. In Sydney (1999 - 2010) he worked as Senior Clinical Psychologist - Department of Health and he was the Clinical Director of both St John of God Psychiatric Hospitals (Burwood and Richmond).

Pieter specialises in Neuropsychotherapy and is an expert in anxiety and mood disorders. He has published 6 Scientific Books and 60 scientific articles. He has been involved in research in extensive clinical trials and presented research papers at 40 International Conferences worldwide. Pieter's latest book – BrainWise Leadership was published in Oct 2013 and is co-authored with Connie Henson. He is passionate about teaching and in 2012 received the University of Queensland Faculty of Behavioural Sciences Executive Dean's commendation for excellence in teaching. He provides global leadership in counselling and is invited on regular basis as keynote speaker at leading international conferences.

He is a member of the Global Association for Interpersonal Neurobiology Studies, the International Society for Traumatic Stress Studies, the International Association for Family Therapy and the Professional Association for Drug and Alcohol Workers, the Australasian Cognitive Neuroscience Society and the Board of the Neuropsychotherapist with fellow researchers Allan Shore, Louis Cozolino, Todd Feinberg and Georg Northoff. He is the chief editor of the International Journal for Neuropsychotherapy and on the editorial board of The Neuropsychotherapist.

### WORKSHOP VENUES

► Sydney ► Melbourne ► Brisbane ► Perth ► Adelaide ► Canberra

### CONTACT US:

[www.mediros.com.au](http://www.mediros.com.au) OR [admin@mediros.com.au](mailto:admin@mediros.com.au)

# REGISTRATION FORM

## The Brain and Persistent Pain: From Neuroscience to Practical Strategies for Treatment

Two-day workshop with  
**Dr Pieter Rossouw and**  
**Pain experts Rachel Kovacevic & Steve McCrea**  
*12 Professional Development Hours*

Pain Workshop  
Admin: PO Box 6460  
St Lucia  
4067, Qld  
Ph: 07 3217 7266

Title, Name and Surname: \_\_\_\_\_

Address: \_\_\_\_\_

Postcode and State: \_\_\_\_\_

Mobile Phone: \_\_\_\_\_

Email address: \_\_\_\_\_

### VENUE: Please Tick

- ☐ **Melbourne:** 18 and 19 July 2014, Royal Melbourne Hospital, Grattan Street, Parkville.
- ☐ **Perth:** 8 and 9 August 2014, St Catherine's College, Uni WA, 2 Park Road, Nedlands.
- ☐ **Sydney:** 11 and 12 September 2014, The Portside Conference Centre, 207 Kent Street
- ☐ **Canberra:** 26 and 27 September 2014, Calvary Private Hospital, Mary Potter Cct, Bruce.
- ☐ **Brisbane:** 4 and 5 December 2014, Education Centre, RBW Hospital, Herston

Amount:	Please Tick:	<input type="checkbox"/> Early Bird:	\$ 595.00 - 60 days prior to event
		<input type="checkbox"/> Standard Registration:	\$ 645.00
		<input type="checkbox"/> Student Rate:	\$ 495.00 - include copy of student card
		<input type="checkbox"/> Group Rate (4+)	\$ 490.00

Included in price: GST, Handouts, Worksheets, Morning and Afternoon Tea, Certificate of attendance

### PAYMENT OPTIONS

#### 1. Credit card – (Visa/MasterCard only)

Card Number: \_\_\_\_\_ Expiry Date: \_\_\_\_\_

Name on card: \_\_\_\_\_ 3 digits at back of card: \_\_\_\_\_

Amount: \_\_\_\_\_ Signed: \_\_\_\_\_

2. **Cheque included:** Tick box if yes ☐ Payable to **Mediros Pty Ltd**

3. **Bank Transfer:** Tick box if yes ☐ Bank details will be on Tax Invoice that will be issued

Email to: [admin@mediros.com.au](mailto:admin@mediros.com.au) OR [andie@mediros.com.au](mailto:andie@mediros.com.au)

Mail: Pain Workshops - Admin, PO Box 6460, St Lucia, 4067, Qld

Fax: 07 3294 3220





NAME: \_\_\_\_\_ Title \_\_\_\_\_

ADDRESS: \_\_\_\_\_

PH/MOBILE: \_\_\_\_\_

E-MAIL: \_\_\_\_\_

## 2014 WORKSHOPS – TWO DAYS

Mark with X

### The Brain & Anxiety: Neurobiological information as Psychotherapeutic Tool

*Continuing Professional Development Hours - 12 hours specialised training*

Melbourne	6 & 7 June 2014	Royal Melbourne Hospital, Grattan Street, Parkville	<input type="checkbox"/>
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### The Neuroscience of Depression: New opportunities for Effective Treatment

*Continuing Professional Development Hours - 12 hours specialised training*

Sydney	29 & 30 May 2014	Portside Centre, Level 5, 207 Kent Street, Sydney	<input type="checkbox"/>
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### The Developing Brain and the Neuroscience of Memory and Trauma

*Continuing Professional Development Hours - 12 hours specialised training*

Brisbane	12 & 13 June 2014	RBW Hospital, Herston Rd, Herston, Brisbane	<input type="checkbox"/>
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### The Social Brain and the Neuroscience of Relationships

*Continuing Professional Development Hours - 12 hours specialised training*

Sydney	21 & 22 August 2014	Portside Centre, Level 5, 207 Kent Street, Sydney	<input type="checkbox"/>
Brisbane	28 & 29 August 2014	RBW Hospital, Herston Rd, Herston, Brisbane	<input type="checkbox"/>
Melbourne	05 & 06 Sept 2014	Royal Melbourne Hospital, Grattan Street, Parkville	<input type="checkbox"/>

## 2014 - NEW RELEASE ONE DAY WORKSHOP

Mark with X

### The Ageing Brain and Neuropsychotherapy

*Continuing Professional Development Hours - 6 hours specialised training*

Canberra	01 November 2014	Calvary Private Hospital, Mary Potter Cct, Bruce, ACT	<input type="checkbox"/>
Adelaide	08 November 2014	Hackney Hotel, 96 Hackney Road, North Adelaide	<input type="checkbox"/>
Melbourne	15 November 2014	Royal Melbourne Hospital, Grattan Street, Parkville	<input type="checkbox"/>
Brisbane	21 November 2014	RBW Hospital, Herston Rd, Herston, Brisbane	<input type="checkbox"/>
Sydney	28 November 2014	Portside Centre, Level 5, 207 Kent Street, Sydney	<input type="checkbox"/>
Perth	12 December 2014	St Catherine's Coll, UWA, 2 Park Rd, Nedlands, Perth	<input type="checkbox"/>

## COST – TWO DAY WORKSHOPS

Early Bird rate (60 days prior)	\$ 595.00
Standard Rate	\$ 645.00
Student rate (copy of st card)	\$ 495.00
Group (4+, one payment)	\$ 490.00

## COST – ONE DAY WORKSHOP – AGING BRAIN AND NEUROPSYCHOTHERAPY

Early Bird rate (60 days prior)	\$ 395.00
Standard Rate	\$ 445.00
Student rate (copy of st card)	\$ 375.00
Group (4+, one payment)	\$ 370.00

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 \_\_\_\_ Bank Transfer - you will receive the invoice & Mediros bank details via email  
Made out to Mediros Pty Ltd

**Email to:** [andie@mediros.com.au](mailto:andie@mediros.com.au)

**Fax:** 07 3294 3220

**Mail:** Mediros (Admin), PO Box 6460, St Lucia, Qld, 4067  
Mediros  
Phone Number: 07 3217 7266