

Psychotherapy in the 21st century

HEALTH

The evolution of psychotherapy now demands the integration of mind and body, leading to calls for a more pluralistic, cross-disciplinary and scientific approach to treating mental illness. In Sydney last year a world-renowned expert in the field, psychologist Dr John B. Arden, presented workshops organised by STARTTS on the integration of neuroscience and psychotherapy. He spoke to Jorge Aroche, Mariano Coello, Nooriah Mehraby and Melanie Leemon about his latest book.

NM: Your book *Mind-Brain-Gene: Towards Psychotherapy Integration* draws from multiple areas of research – genetics, epigenetics, neuroscience and psychoneuroimmunology – to describe the complex interconnections taking place in our minds. In what way is it a departure from more traditional schools of thought?

Indeed, the book enlarges the scope dramatically. We can no longer just talk about the brain and leave the body out. We know different states of mind relate to different operating networks (the default networks, salience and executive networks). We now understand the mind is the constant cycling of these different states which interact through feedback loops. Each mental operating network corresponds to particular activation patterns in the brain.

The mind contributes to self-organisation and to our sense of individuality, as we evolve within our families and relationships. So not only are body and

mind integrated, but we also now have a better understanding of how the immune system interacts with our emotions and behaviours, and can unravel our capacity to maintain a positive mood and clarity of thought.

We need to acknowledge that our experiences and our responses to those experiences will in fact change our brain, our immune system and gene expression, resulting in either mental health or mental illness. For example, we have come to realise that chronic inflammation and autoimmune disorders are strongly associated with depression and anxiety. We now know that the dysregulation of the immune system, the diet and gut bacteria profoundly affect our mental health.

In my book I have combined the fields of psychoneuroimmunology, epigenetics with the neuroscience of emotional, interpersonal and cognitive dynamics. I have also combined mindfulness with psychotherapeutic approaches, in order to achieve an integrated, more

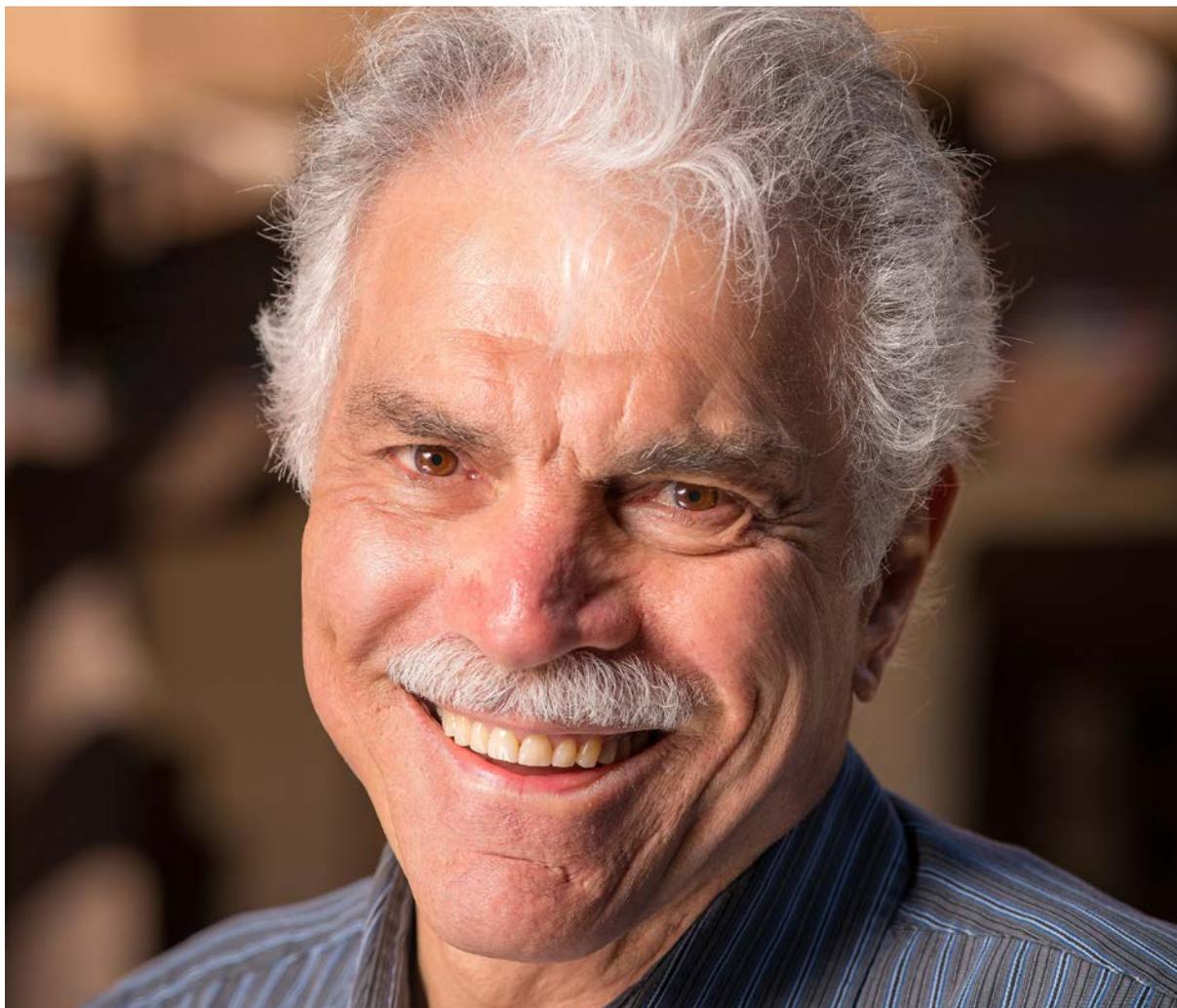


Photo courtesy of Dr John B. Arden

complex vision of psychotherapy. I have also explored the relationship between insecure attachments, deprivation, child abuse, trauma, anxiety disorders and depression, to produce epigenetics affects.

MC: You have written about the adaptation of genes and what happens to us when our immune system is inappropriately activated. Autoimmune disorders are becoming more prevalent and may be linked to intergenerational trauma. We have populations that are victims of genocides with high prevalence of these disorders.

Yes they are. In my book I have included an overview of psychoneuroimmunology and epigenetics – how gene expression changes. Genes do not determine behaviour, but adapt to the environment. What genes are turned on and off depends on the person's environment, life experience and lifestyle. Lifestyle is critical, so I always emphasise the importance of

building on the SEEDS – social activities (having many significant relationships), doing exercise (the best antidepressant), engaging in education (constantly learning to keep the mind agile) and healthy sleep (to restore the mind and body). These are fundamental for a healthy body, mind and immune system. Otherwise we run the risk of inappropriately activating various genes that will dysregulate the immune system.

My book explains the factors that influence the brain, the gene expression and feedback loops. By feedback loops, I mean the constant triggers and reactions of the various elements taking place and the ways they affect and feed on one another in positive or negative ways. Feedback loops rump up the system in a constant interplay. I would define feedback as bidirectional causality.

So feedback loops encompass who we are. We are the result of all these interactions taking place, turning on and off genes in our immune system, and brain. They

occur at different levels because the different systems are interconnected at multiple levels and if they don't interact they get out of sync and become dysregulated, causing the person to succumb to ill health. Feedback loops get dysregulated with extreme disruption in a person's life caused by trauma. Excessive stress and trauma can in fact contribute to dysregulate the immune system. It can turn on genes, making networks dysregulated and causing autoimmune disorders such as diabetes.

JA: The integrated model you wrote about is complex because it involves different types of expertise. This is the challenge your workshop leaves us with. You keep challenging us in different ways about the integration of mind and body. While the counselling approach is important, people are affected at many different levels and may require a broader range of interventions. The question is, how can we orchestrate an integrated approach to treatment to help people rebuild their lives after torture with limited resources? And, what do you think is the best way of helping those experiencing post-traumatic stress disorder (PTSD).

There are practical challenges in applying this model as you don't have endless resources, but gradually it is possible to enlarge the picture or at least part of it. We may not be able to do everything at once, but we need to realise there is more to treatment than just the counselling approach. Therapists need to be in that mindset. I understand they will have varying degrees of expertise and interests. Not everyone needs to get to that level, as long as there is a general awareness and understanding of the concepts presented at the workshop

I would say that 90 per cent of people that experience trauma do experience depression. People can be depressed and anxious at the same time. To treat PTSD, therapists need to help clients stay in what we call "the window of tolerance" and expand it gradually. However, sometimes the person's memory systems may be impaired. For example, the hippocampus may be atrophied and explicit memory capacities may be impaired. Even if memory capacities are impaired it is possible to revitalise those areas of the brain with something as simple as doing aerobic exercise, diet, getting good-quality sleep and social support. Psycho-education is also crucial for the person to become aware of what is happening to their brain and start self-regulating the emotions. Inactivity and social isolation, on the other hand, have negative effects as well as sleep dysregulation.

Of course, depression is a black hole and one of the

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most complex disorders to treat, because so many systems shut down. With depression, a shutdown occurs between thought, movement and emotion. So therapists need to pay attention to the many intersections taking place. They also need to assess if there is a risk of suicide or destructive behaviours, because thought, movement and emotion are so deeply affected by depression that a well-orchestrated approach will be needed to lift them out of it. Depression is the loss of mental networks, and inactivity fuels it. Anxiety relates to depression. To treat it we need to revitalise the hippocampus. Antidepressant medication can work, but exercise is the best antidepressant. Mindfulness is useful to control rumination (which is excessive default mode activity) as is concentrating on a mental task. To treat depression, we need to look at a person holistically and work towards restoring harmony between feedback loops, because depression is the result of these systems not working together. Our job as psychotherapists is to get them in balance.

If we are working with someone who has experienced trauma, he or she may have an overactive default network – they will be constantly thinking about what

happened to them, why it happened and perhaps be stuck ruminating about the past. When people have been traumatised they are hypervigilant and cannot readily differentiate between what is a threat and what isn't, because of the imbalance between these networks. When you are working with someone with dysregulated memory systems you need to access the executive system or the working memory systems. Having said that, trauma doesn't necessarily always destroy lives. Beethoven was a person with multiple life stressors, yet he had a very productive and in many ways fulfilling life.

MC: You mentioned the influence of gut microbes on health and how they can influence mood and behaviour. What happens when you get low diversity of bacteria in the gut?

You don't only develop chronic inflammation, you also have low levels of neurotransmitters such as serotonin, so you don't feel so well. That is the reason a healthy diet is so important. How do you deal with inflammation? The problem with anti-inflammatory drugs is that they don't have a good effect on multiple systems and you also get some side effects. In my opinion a balanced diet and exercising on a regular basis are the most beneficial ways to contribute to mood stability and alertness, which contributes to having good sleep architecture. Research conducted by the World Health Organisation showed that not exercising has worse health effects than smoking.

NM: Are digital devices altering the brain? There has been talk that computers weaken our brain or that our brains are changing by constant use.

Yes, digital devices are altering our way of life. We are adapting to a repetitive pattern of instant gratification and we are isolating ourselves from other people. Not being connected with others impacts negatively on our social brain networks. Sitting down most of the day and not getting out in the open air is not good for our health. At the same time, reading computer screens at night dysregulates our sleep cycle because excessive light in the evening suppresses the release of melatonin – which affects our sleep pattern by often causing insomnia, which means we are groggy the following day.

So while the internet has brought many benefits in terms of access to immediate information, we need to ensure we keep the balance right because it can also cause addictions, particularly to games.

ML: How can you help people with addictions?

People with addictions have dysregulated neurotransmitter systems. Every drug yields a less pleasurable outcome the more you use it, because the dopamine circuits get tired. There are, of course, different dopamine types.

Video games have addictive patterns. Social media is addictive. The big question for those addicted to something is, where are you getting your pleasure from? Probably not from a wide repertoire of pleasurable activities. This is where balance of the different networks is crucial. In Iceland they went from having high levels of alcoholism and drug use among their youth to the lowest in Europe. How did they do it? Other European countries adopted the Iceland model. In doing so they developed a multilevel intervention plan that changed their life style to acquire satisfaction from different sources rather than from alcohol only. You need a broad repertoire of pleasurable activities to maintain the balance. We call it “complex thought satisfaction”.

MC: It was kind of refreshing listening to you at the workshop. It helped me to reflect on the complexities we face every day as therapists. As you said it is not necessary to speak to the people we assist in technical terms, yet you still need to name the areas of the brain we are working on in relation to the interventions. At times we have over-explained the concepts. This is something to reflect on in terms of how we conduct psycho-education and how we innovate with our programs and interventions.

Two words keep coming up: complexity and simplicity. There are complex systems but we have to simplify them making them clear and coherent. What we need to do is “depathologise” concepts as much as possible. The more we do so the more the person is going to feel less impaired. That is the reason I don't like the word clinician, which only conveys a dichotomy, the client versus the psychotherapist.

NM: What are the key messages from the workshops?

That therapists need to broaden their knowledge to be able to assess the person they assist more holistically, to provide more integrated interventions. As mentioned earlier, we are the result of multiple interactive variables that need to work together and psychotherapists need to pay attention to all of these, otherwise they could delay the person's recovery.

It is important for therapists not to pick one school of thought and say: “This is the area I am familiar with and the area I am going to focus on and I don't want to learn much about the rest.” I would say to them:



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“Broaden your perspective and knowledge, get familiar with areas you never thought you would be familiar with. Don’t limit yourself to the area you are most interested in, but learn about the areas you are least familiar with. Those are the areas you should start to cultivate.” Don’t say “that is the domain of specialists”; instead, think of yourself as a “multi-dimensional health care worker”.

Integrated, collaborative health care is the way forward. Psychotherapists need to help people change their brain, their bodies, their lives, their interactions so that their lives are more functional, enjoyable and adaptable. Our job is to make the networks work well together, balanced and in harmony, and we need to help them orchestrate the fluidity between them. Psychotherapists are like conductors of a symphony orchestra and the orchestra is comprised of all these elements (feedback loops or mental operating networks) that make us who we are. So we need to understand how these systems interact with one another. The mind is comprised of the interacting activity in all these areas of the brain and the body. And it is our job to orchestrate these interactions in a much more coherent way than we ever did before.

I understand this is a sea change in the way we address mental health. We are now looking at the common denominators between the different schools of thought and trying to connect and integrate them.

As mentioned earlier, the brain and body are part of complex, interacting systems. This is quite a challenge for those that have been trained just to do counselling. Psychology is evolving at a fast pace and incorporating other fields of science, so the person who studied psychology in the past today would be studying a totally different psychology. The courses have changed, the theories have evolved, it is very different. If I wanted to study for a PhD now compared with doing so in the past, it would be totally different.

So yes, psychologists need to continuously adapt, evolve, change and expand their knowledge and skills, probably more so than in any other field because we now know so much more about the interaction between the mind, the brain and the immune system.

Psychology and medicine are now intersecting, so functionally medicine and psychology are two sides of the same coin. We can call it behavioural health or behavioural medicine. The world of the 21st century is so much larger, embracing so many more aspects than ever thought of before. I hope my book contributes in some way to that sea change. R