

# Dementia & Beyond

02 in the series



I think most of us have grown up with the idea that growing old means going gaga. I can remember visiting elderly people in hospital and long term care, and that image of the 'senile older person' is pretty hard to forget. We can all be forgiven for assuming that old age and senility go hand in hand. The reality is that this sector of the population is much smaller than we may believe. We tend to see large concentrations of elderly people with cognitive deficits in certain situations, but we don't see the large numbers of people who still live independently in their own homes. But regardless of any assumptions we may have made, so many of those elderly people with cognitive deficits have a condition that is completely treatable. The truth is that for any of us who are finding ourselves losing our cognitive edge

## It simply does not need to be this way!

My experience is that the world tends to be full of well-meaning people, who are doing the best that they can; however, that doesn't mean that the people in their care are actually getting access to the best treatments. I continue to find that the standard of care in long term care facilities (especially in Australasia), could be dramatically improved upon. Many of the unfortunate things



that are done, are done out of ignorance. When people know better, they end to provide a better level of care, and we should be constantly challenging the basic assumptions being made, such as cognitive decline being inevitable as we age.

Over the years, I have done a lot of work in long term care, and my view was always that someone could easily be there for 10 or 15 years, or maybe longer. Sitting back and ‘letting nature take its course’; was never an option for me. I have always believed that people deserve the best, no matter who they are, and this always goes doubly so for the elderly; primarily because they often find themselves in situations where their ability to make their own decisions has been drastically reduced. I am certainly not one who buys into the ‘ambulance at the bottom of the cliff’ mentality, especially when I know that so much can be done to improve upon the function and well-being of so many.

The focus in science may well be on find a magic pill to ‘fix’ cognitive deficits, but I find there is an astounding lack of understanding of the function of cognitive performance permeating ‘the science.’ I recall hearing a neuroscientist in a radio interview saying how, once the underlying damage to the brain was repaired, all the person needed to do was practice a task, just like he did. Such statements reveal an astonishing degree of ignorance around how we actually do what we do, and inevitably call into question what it is that science thinks it is actually going to achieve. It should be obvious that all of us actually need the capacity to perform any task, or we will not be able to perform it. This is why the realm of functional performance is so critical in all of this.

Ultimately, the capacity to improve upon cognitive performance requires us to understand what cognition actually is, and how we generate any of the skills and abilities in the first instance. When I first began my work in visual perceptual performance, I used a great many of the terms commonly associated with cognitive performance and I initially wondered if I had stumbled across a more subtle level of cognitive performance.



These days my perspective has changed and I now see cognitive performance to be an appearance, or the consequences or result of, something much deeper and more profound. I also see that this deeper layer of performance is obscured by the very way in which we and seeing and engaging in the world. I often use the analogy of ‘staring down the barrel of a gun and not being able to see how the bullet is being fired, because it is in the way’ to explain this dilemma.

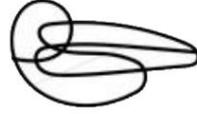
At the core of our functionality, perception and performance exist in an intimate and reciprocal relationship. They both utilise the exact same skills, abilities and processes, just reciprocally, and performance tends to follow perception ie: we act on the basis of what we perceived, with those actions having an impact on what we then perceive. What we are observing in cognitive performance is the result of this underlying level of perceptual performance leading into the core function of pattern recognition and construction.

When we perceive, we are integrating sensory information into patterns, which we then recognise and go on and name. When we perform, we are generating or constructing patterns of performance, which is then expressed through various avenues in the body – neurological, cognitive, physiological, psychological, social and emotional.

Any breakdown in performance is a consequence of a breakdown in perception, where all information available is not being accounted for. This, in turn, is a consequence of the person’s threshold tolerance for sensory loading being exceeded.

What I am referring to here is our capacity to take in or receive phenomenal volumes of sensory information via all of our felt experiences. Our entire worldview is constructed of our perception of all of this sensory information and when there is a breakdown in our capacity to connect the dots and make sense of this information, our worldview will have information that is not being included and our performance will be carried out on the basis of this.

The more complex a task or situation is the more sensory information it contains. This is the only difference between something being simple or complex. However, for most of us this is a very new concept to understand. Most of us are used to judging something to be simple or easy because we can perform it with ease. We just do not understand that some of the things we do on a daily basis, and take entirely for granted, are actually comprised of highly refined levels of perception and performance.



So let's look at something we all pretty much do without ever giving it much consideration – walking, and let's consider how it is any of us walk. We get up in the morning without having to think, "Now how does that walking thing go?" We can walk and perform all manner of other highly refined and integrated tasks at the same time – carrying cups of coffee, talking, navigating crowds and city streets - and never give walking a moment's consideration.

Take a moment now to look at your experience of walking and consider how you are doing it. The answer you give right now provides great insight into why we have this great schism in life between academics and the more practically or experientially based of us.

If you did indeed look to your experience of walking, you would have immediately seen that you have no idea at all how you are walking. If, however, you jumped into your mind and began an intellectual analysis of walking, you will know be ready to tell me how you **think** you walk. It is the exact same dynamic at play when we hear scientists say that we just need to practice a task in order to perform it, without any consideration of the need to have the **capacity** to perform the task; or why we know have God knows how many supposedly different types of 'memory.'

Ironically, none of us can argue with the logic that the very young child just does not have the cognitive capacity to work out how to walk, let alone to tell us about it. If we observe that child they are very much engaged in the experience of standing up and taking steps, they are not thinking their way through this task. In fact, consider what does happen to walking as soon as you do try to think your way through it. It immediately becomes fractured and chaotic and performance declines. We are also no longer able to perform those other tasks - carrying coffee, talking, and navigating – at the same time.

What I have just demonstrated here is the difference between integrated task performance and conceptual task performance. While we all utilise conceptual task performance, especially whilst performing complex or new tasks, this has to quickly move into integrated task performance, where we are no longer having to think our way through the task, in order for our performance to be fully functional and optimised. Just imagine what would happen if we all continued to drive a car in the same manner as when we were first learning.

Thinking our way through a task is called conceptual task performance and it is something we see a lot of in people who have a cognitive deficit. It occurs because there is a decrease in the person's tolerance for sensory loading, because the pathways in the brain have been damaged. Integrated task performance cannot be maintained, because there is an inability to account for all sensory information, and mistakes in their task performance start to occur. This sets off a chain reaction of

provoking anxiety and a need to check the work being done to minimise these mistakes and we will do this via conceptual task performance ie: thinking our way through the task.

One of the issues frequently overlooked when someone has a neuro-cognitive disorder is the role their psychological and emotional status, particularly anxiety, plays. When the brain is damaged and we can no longer account for all sensory information in our environment, this does not mean that it is still not flooding into our nervous system. We are still receiving the same volumes of sensory information, it's just that we cannot process and integrate it as we did previously. Any information that is not integrated remains in our system as undifferentiated sensory information or **sensory noise**. It is this noise that is responsible for sensory overload.



Most of the symptoms people with neuro-cognitive disorders experience are the consequence of sensory overload and it can be very debilitating. It also provokes anxiety in a great many people, simply because they feel overwhelmed. Our psychological and emotional status is very much a felt experience and will add to any sensory overload being experienced. The consequence is a downward spiral of sensory overload, anxiety, increased sensory overload, increased anxiety, etc.

Because of this dynamic, one of the first things I will recommend for anyone who is experiencing a loss of neuro-cognitive performance and where anxiety is an apparent issue is that they see their GP and are prescribed a medication to interrupt this cycle. Ultimately there are distinct differences between feeling overwhelmed (a psychological response) and being in sensory overload (a neuro-cognitive response.) But none of us are able to recognise this whilst we are caught up in this cycle. At the time of writing this (edited Jan 2020) escitalopram is the drug of choice for treating these issues and, not only will it decrease any associated anxiety, it will allow any medical practitioners to gain a clearer clinical picture of the person's neuro-cognitive status.

## It's all about sensory information

Anyone who has a neuro-cognitive deficit has had some damage occur to the pathways in their brain. Their capacity to deal with the everyday volumes of sensory information has been diminished and they are unable to process and integrate all of this information. This means that they will leave some sensory information out of what is being integrated and, because all of our performance follows on from what we perceive, information left out of what is being perceived, will also be left out of the tasks being performed. They will also be in sensory overload, caused by the information that cannot be integrated remaining in their system as sensory noise.

What I have just said here is at the heart of cognitive performance. While we may look at what someone is doing and determine that they have a neurological cognitive based disorder, such disorders are only ever the outcome of a much deeper issue – a breakdown within perceptual performance. If we are going to understand cognitive performance, we need to understand it is all built upon perceptual performance and that much of what we are observing is an appearance and is not real, solid to actual.



*Natoya Rose*  
*Occupational Therapist*

*With that, I would like to welcome you to my world,  
the world of visual perceptual performance*

