

# You Need to Make the Most of Your Creativity

*'Everything you can imagine is real.'*

*Pablo Picasso*

## **Creativity and dyslexia**

Whilst it is a widely held view amongst the dyslexic community that dyslexia is associated sometimes with remarkable artistic creativity, this is very controversial. Why is this so? A study of creativity indicates some very interesting ideas.

In fact, very few academic studies confirm the link between creativity and dyslexia. It may be that this is due to an insufficiency of academic studies researching this area. It is also necessary in the research for the test of the hypothesis to be very carefully constructed in order to

yield interesting and valid results. Whatever the reasons are, so far we do not have a conclusive, evidenced study confirming any link between the two areas.

However, one study has looked at the prevalence of art students with dyslexia difficulties compared with non-art students (Wolff and Lundberg 2002). This found that the incidence of dyslexia was higher amongst the art students. It may be, though, in this instance, that what we are seeing are individuals who have honed their skills in one particular area because they felt at a disadvantage in studies that required good literacy skills. However, personally, I do not feel this gives us the full picture so let's examine this from the beginning.

## **Creativity of preschool children**

In studies done with preschool children, they are shown to be capable of great creativity. However, by the time they are 11, only 1.6 per cent of them score as highly on tests of creativity. So to be still capable of creative thought as an adult is a very much needed ability. Somewhere in early childhood a lot of us are losing our creativity. So where does it go?

## **Left-brained or right-brained – it's a myth**

I have frequently heard dyslexic artists say they are right-brain dominated. This concept that those with right-brain dominance are creative and emotionally centred, whereas those with left-brain dominance are rational

and analytical, is a myth. It came about from studies done in the 1960s. The research was done on patients with severe epilepsy who were operated on to sever the cross-hemisphere connection. Post-operatively these patients do not represent normal brain activity. We now know that both hemispheres in the brain are inextricably linked. Creativity involves many cognitive processes, neural pathways, our emotions and memory.

### **Do we know how the brain works for creativity?**

The reality is that we know relatively little about the operation of the brain. Additionally, whenever we learn more, it also teaches us how complex it is and how much more we have to learn! Why is it so difficult to examine the brain? After all, we have some extremely sophisticated technology now such as Positron Emission Tomography (P.E.T.) scans and functional magnetic resonance imaging (f.M.R.I.). Designing neuro-imaging studies, however, is extremely tricky. The average human brain has about 100 billion neurons (or nerve cells). These are connected to each other by billions of spines which contain the synapses. The synapses allow chemical or electrical signals to pass between neurons. A typical neuron fires 5–50 times per second. Therefore, it is not surprising that capturing brain activity using even sophisticated technology inevitably leads to oversimplifications. We're also not really sure what we are looking for, or where we are looking, when trying to track creativity.

Therefore, what follows is really only everyone's best guess about how it seems to work.

## **The creative process**

We know that cultivating ideas and being creative is a process. There seem to be 3 possible variants:

- Simply combining things we knew already.
- Bringing things we know together but seeing them in a new relationship to each other.
- Learning something completely new to us and connecting that with what we knew already.

How we do this appears to be a process consisting of:

- collecting information for the brain to work upon
- manipulating the information
- producing something new (the 'aha' moment)
- evaluating ideas.

Now if you look at Chapter 5 about atypical problem solving, you will see that this is our old friend 'divergent thinking'. We know that dyslexics are good at this because their brains direct signals around a roundabout route enabling unusual combinations to occur. So is this another link to why dyslexic people state they are good at creativity?

## **How the brain achieves the creative process**

We have already determined that creativity does not involve a single brain region or single side of the brain.

It results from the dynamic interactions of lots of brain areas that are called into action according to the task and operate in large-scale networks. One network is responsible for us really focusing on a task, but it should be noted that this puts heavy demands on working memory, which is often more difficult for those with dyslexia. This may partially explain why dyslexic adults tend to find congruent thinking, that is, choosing the best solution, more difficult to do.

A second network is thought to be responsible for constructing thoughts on previous experiences, empathy and generating alternative scenarios. This is the area that we believe dyslexic adults are particularly good at.

Finally, a third network monitors things that are happening to us and our stream of consciousness; this controls which part of the brain is best for what task. When we allow the control area to relax, more ideas are allowed to flow. This may be why we come up with better ideas when we sleep on them!

## **The characteristics of creative individuals**

There have been lots of studies on creative people, just not on dyslexic creative people. These studies have tended to point to individuals who are:

- curious, adventurous
- willing to take risks

- persistent and determined
- passionate and potentially compulsive over their particular interest
- resilient to criticism from others, so have sufficient self-esteem
- unconventional
- tolerant of disorder
- often self-taught and not successful in education systems.

Does this remind you of anyone or another list of characteristics? Interestingly, some of the case studies quoted in the research on creative individuals name people who are known to be dyslexic.

## **You don't have to be super-bright to be a creative genius**

One of the questions examined has been how bright you have to be to be really creative. In fact, there are lots of problems with using I.Q. tests, particularly in the area of creativity. I.Q. does not map easily onto improvements in anticipated life outcomes. The tests often don't work fully with dyslexic people because many rely on literacy. Tests are also subject to cultural differences. Additionally, how can you compare one person's creativity with another? It is much more personal than that, it's much more ipsative (i.e. looks at a range of individual

factors in a person rather than comparing their scores with another person's). In conclusion, the research has led to the 'threshold theory' which holds that, above a certain level, intelligence doesn't have much effect on creativity.

### **Is creativity hereditary?**

We know that dyslexia is inherited, but we don't know about creativity. It is certainly true that you get siblings who are creative. As examples, we have a whole family of Strauss (composers), Ben and Casey Affleck (actors), Beyoncé and Solange Knowles, Miley and Trace Cyrus, William and Wellington Grisa (software developers), Christopher and Peter Hitchens (authors and journalists). This takes us to the nature versus nurture argument: were they born with talents or were the conditions right as they grew up to nurture those talents?

### **Is there a link between creativity and mental health?**

There are a lot of studies that have been done to see whether creative people are more prone to bipolar disorder, depression and mood swings. Whilst there are lots of examples that can be quoted, the research just isn't strong enough yet to establish whether a link exists. One thing we do know about mental health, though, is that it's not that healthy to brood and have negative thought patterns. A lot of creative people do need to have space and time to think to be creative. You may

remember that in my research, many of the respondents advocated that young dyslexic people need to develop positive mindsets. Many dyslexic adults suffer from stress and there is considerable interest in health and wellbeing currently. However, as Tom Insel, head of the U.S. National Institute, said, 'Psychiatric disorders are massively, intimidatingly complicated.'

### **Creative success doesn't just happen**

Therefore, while we would all like to think that creativity just happens, the studies show that this is not the case. Where huge breakthroughs are made, generally the creative thinker has extreme interest in their topic, has spent many hours thinking about it and is an expert. You can see this with examples such as Bell on the invention of the telephone and Edison on the invention of the light bulb (they had 1000 failures en route). Incidentally, Edison was told by teachers that he was 'too stupid to learn anything'. Creative success takes hard work, revision, failure, extensive knowledge and persistence.

However, being able to take in all the specifics in a given situation and spot patterns in a dynamic changing situation (which is a particular strength that some dyslexic adults have) is definitely a help to this process.

### **Examples of creativity by dyslexic individuals**

So whilst the research may not yet back up the idea that creativity is linked with dyslexia, it is really interesting to

look at the things that dyslexic individuals have created. While we often tend to think of creative people as being artists or actors, we have seen already that there are lots of ways of being creative. Maybe this gives us a different kind of evidence base. Here are some examples of other types of creativity by dyslexic adults. Our lives have all been touched by these individuals' inventions:

- The Wright Brothers were two American brothers and aviation pioneers. They are credited with inventing, building and flying the world's first successful airplane from North Carolina, U.S.A., in 1903. Whilst they were not the first to build and fly novel aircraft, they invented the first workable fixed-wing aircraft. Their invention of the 3-axis control, enabling the pilot to steer and maintain the aircraft's equilibrium, was a breakthrough. Interestingly, their approach was significantly different to other research at the time.
- Baruj Benacerraf, a Venezuelan-born American immunologist, received the Nobel Prize in Physiology with 2 colleagues in 1980. He had discovered the major histocompatibility complex genes which encode cell surface protein molecules important for the immune system's distinction between self and non-self. This has been an incredibly important building block for many areas of medicine, including transplant surgery and the treatment of autoimmune illnesses. Benacerraf attributed much of his success to having good

spatial awareness, but it is also obvious that he worked with determination on his research.

- Walt Disney was an American film producer and animator. He created Mickey Mouse, Fantasia and Dumbo. He was the first person to introduce live action with animation. However, Disney was also obsessed with innovation and founded the Imagineering department. This has since been granted over 115 patents in special effects, interactive technology and fibre optics.

## **Find out how creative you are**

If you are ready for a bit of light-hearted fun, you may want to try out the following quiz to see how creative your brain is already:  
[www.shelleycarson.com/creative-brain-test](http://www.shelleycarson.com/creative-brain-test).

## **Conformity stifles creativity**

Conformity is the enemy of creativity. The process of conforming starts in school but it continues into work. If there were no agreed ways of working together, there would be conflict all the time! This is why we have grievance and disciplinary policies at work – they codify the ways in which we handle conflict. Other policies such as Health and Safety spell out the rules that we need to conform to in order to keep everyone safe.

However, these do not leave room for anyone to be creative. While these policies are very necessary for harmony and productivity, which we all desire, the downside is that if you spend a lot of your time conforming and also working at a job with lots of procedures which leave little scope for creativity (which is common), then the creative side of your personality can get rusty. Your brain just doesn't have to think in creative styles, but needs to practise in order to be versatile with different thinking styles. Here is how we can re-energise our creative thinking abilities.

## **Re-energising our creativity**

Can you think of areas in which you are creative? If you are struggling for inspiration on this, ask a friend or partner about where they see you being creative.

Sometimes we don't see our own strengths – we tend to take them for granted (though we are usually very aware of our weaknesses!). It's very important to give due weight to our abilities. Maybe you will find that you need to unlock your creativity.

So to unlock, or re-energise, your creativity, you need to be freed up and do creative things more often. You need to find ways to collect information for the brain to work upon. Here are some ways you can start to do this:

- **Create some space in your life** when it's O.K. to do nothing or be creative.

- **Get some resources that you can make things with.** This could be blank paper for drawing, painting, craft or writing on. It could be bits of wood for making things, or material for sewing or knitting. It doesn't matter what you do as long as you feel free to experiment and, once you do that, your imagination will take over.
- **Learn to meditate.** This is easy and there are lots of guided meditations on YouTube to get you started. When your mind is free-flowing and relaxed (which is what meditation is all about), then new ideas will start to evolve without you consciously having to do anything.
- **Learn or do something completely different.** This will stimulate you to think about new things and encourage your brain to make new connections.
- **Use a concept map to do some 'blue sky thinking'.** In this you think about something you might want to do, such as to have an adventure, visit Nepal or Machu Picchu or anything else that attracts you. Jot or draw all the ideas you have; do not evaluate them or cross anything out until afterwards. This ideas generation is very creative and it's the later activity of evaluation that is different; the appropriate style of thinking for that is rational thinking.

If you are looking for additional stimulus then go to [www.ted.com/talks/tim\\_brown\\_on\\_creativity\\_and\\_play](http://www.ted.com/talks/tim_brown_on_creativity_and_play) for further ideas and activities.

***Allow time to process the information  
and wait for the 'aha' moment***

Once the brain has enough stimulating material, you need to be able to trust it to do its best. As we learned earlier, the brain is most active at creating the connections essential to creativity when we are relaxed. It doesn't work well when we are concentrating heavily on the task before us or when it's exerting control on our behaviours. So, we need to give it space to think unconsciously. You cannot force the 'aha' moment of inspiration or insight. In fact, we all know from experience that our best such moments occur at the oddest times. We wake up with a complete solution to a problem that we had been tussling with all the previous day. Or we are doing a mindless task, such as mowing the lawn, when suddenly the light-bulb moment arrives!

***The more ideas the better, but you  
need to evaluate them***

Our brains are working all the time with thoughts flitting in and out. The more stimulus we give ourselves, the more ideas we will come up with. This is good – it's good to have lots of ideas as some of them will be bad. So the final stage in the creative process is to evaluate our ideas and only select the good ones. This is exactly the same process as we use in problem solving.