

MULTI-MILLION COPY BESTSELLING AUTHOR

TONY BUZAN

The Power of
Creative
Intelligence

10 ways to tap into
your creative genius

The Power of
**Creative
Intelligence**



Tony Buzan



dedication

The Power of Creative Intelligence is fondly and warmly dedicated to Lesley and Teri Bias; my mum, Jean Buzan; Lorraine Gill, Vanda North, Nicky and Strilli Oppenheimer, Dr Petite Rao, Caroline Shott and Carole Tonkinson for their creativity, dedication and hard work in making this little book come true.



contents

PerfectBound Extra: Introduction to the E-book by the Author

List of Mind-Maps®

- Chapter 1:** Introduction – Beginning Your Creativity Journey
- Chapter 2:** Using Your Magical Left and Right Brains 12
- Chapter 3:** Infinite Creativity – Mapping Your Mind with Mind-Maps®
- Chapter 4:** You the Creative Artist
- Chapter 5:** You the Creative Musician
- Chapter 6:** Creative Productivity – The Power of Volume and Speed
- Chapter 7:** Creative Flexibility and Originality
- Chapter 8:** Your Brain: The Ultimate 'Association Machine' – Expansive and Radiant Thinking
- Chapter 9:** You and Shakespeare – Poets Both!
- Chapter 10:** Only Kidding

Congratulations!

Contact the Buzan Centre

Acknowledgements

About the Author

Other Books by Tony Buzan

Credits

Copyright

About PerfectBound

special introduction by the author



introduction

Did you know?

- People have ‘miraculously’ recovered from critical illnesses such as cancer, and have overcome severe disabilities, simply through sheer willpower – their brain’s control over their body.
- You can affect ‘automatic’ bodily processes like your temperature and heart beat, physical health and athletic performance solely through the power of your thoughts. In 1970, an Indian yogi, Swami Rama, caused two areas a couple of inches apart on his right hand to change temperature, in opposite directions. The rate of the temperature change was about 2°C (4°F) per minute, and he was able to maintain the change until there was a temperature difference of 5°C (10°F)
- The tennis player Billie Jean King was considered by her opponents to be almost unbeatable once she had mentally

‘programmed’ her body to win, despite the fact that there was no particular physical area in which she was superior to everybody else.

In this book I will acquaint you with the awesome power and potential of your body and mind.

When I was a young boy at school, I found myself perplexed and confused by many questions to which I found I had no answer, and demotivated by comments from my teachers that seemed to confirm my lack of intelligence, concentration and energy.

My unanswered questions included the following:

- Why were things like geography, history, English and science considered more important than sports, art and music?
- Why was it that some boys (whom we all considered brilliant) were thought by our teachers to be disruptive and stupid, while some boys whom we thought to have no common sense at all, were considered bright by our teachers?
- Why would I sometimes get a lower mark in a test in which I knew I knew more than other students who, for some inexplicable reason got higher marks than me?
- Conversely, why would I sometimes get a higher mark in a test than someone whom I knew knew more than me?

My teachers’ comments about my general academic career included:

- ‘Lazy’

- 'Tends to day-dream too much'.
- 'Poor power of concentration'.
- 'This young boy is obviously not talented in art'.
- 'Can be a disruptive influence in the classroom'.
- 'Failed to live up to expectations – a disappointing performance'.
- 'Shows no aptitude for PE [Physical Education]'.
- 'Performance in history appalling – shows little interest or talent in the subject'.
- 'Non-university material!'
- 'Could do better'.

Sound familiar?

My unresolved questions gradually clarified themselves over time into three far more focused and incisive points:

1. Who says who is intelligent?
2. Who is the authority that defines what intelligence is?
3. Can IQ be changed for the better?

My attempts to answer these questions became my life's work, and led me to spend the next 30 years exploring the brain and the processes of intelligence, and inventing the concept of the Mind Map to improve our intelligences.

This book is really written as a rescue operation for all those brains on Planet earth who have raised the same questions and/or received similar comments on their school reports!

Enjoy the rediscovery of your natural intelligences!

the challenge

In the 1950s, Alan Turing, the inventor of the computer, challenged the computer industry to create a machine that was intelligent as a human being.

The test was, and is, as follows: three knowledgeable and intelligent human beings were to sit facing a curtained barrier. Behind the curtain were another three intelligences: two humans and one computer. All three pairs were to engage in conversation on any topic chosen by the first three people. A prize would be awarded if the computer could convince each of the three people in front of the curtain, in turn, that it is one of the two human beings behind the barrier! As this new century begins, no one has even come close to claiming the prize.

Dramatic as it is, and successful as it has been, the Turing Challenge (as you will discover) has missed at least 90 per cent of the point!

The challenge was based on the old assumption that IQ and human intelligence were primarily based on the power of words. We now know that this is only one of the many intelligences that we have, and that for a computer to prove that it is equal to your human brain, it must demonstrate skills in all 10 intelligences simultaneously – for a computer to combine numerical, physical, sensory, creative and spatial intelligences would be far more appropriate demonstration of human-like intelligence!

It seems as if the prize will stay unclaimed for a good while yet.

a brief history of intelligence

The history of the development of our knowledge about intelligence is fascinating. Although leading thinkers had been searching for a long time for any clues as to ‘what makes us tick?’ and ‘what makes us smart?’, amazingly, the concept of the Intelligent Quotient has been around for less than 100 years – the first experiments in intelligence testing by ‘scientific means’ started only at the beginning of the 20th century.

Some of the early experimenters were a little eccentric: measuring the knee-jerk response time to see whether the faster your reaction were meant the smarter you were, relating height to intelligence, and measuring bumps on the scalp to see if any of them were ‘smart’ bumps. However, a French psychologist, Alfred Binet, did eventually come up with the first, genuinely scientific method for objectively measuring intelligence. It involved setting standard verbal and numerical test, with the scores measured against an average of 100.

Binet’s IQ tests were accepted without question for over 60 years, but by the 1970s, ideas about intelligence were beginning to change. Professor Howard Gardner, Professor Robert Ornstein, myself and others became aware that there were a number of different kinds of intelligence, and that each different intelligence acted in harmony with each of the others when they were properly developed.

A truly intelligent person is not one who can simply spout words and numbers; it is someone who can react ‘intelligently’ to all the opportunities, simulations and problems provided by the environment. Real intelligence means engaging your brain with every aspect of life – you play sport with your brain; you relate to others brain-to-brain; you

make love with your brain. All of life is, in fact lived 'head first'!

the ultimate intelligent star – leonardo da vinci

Leonardo da Vinci is regularly given as the best example of the 'all round genius'; in other words, as the individual who has most dramatically demonstrated the use of all his intelligences. Leonardo's genius was so great that some people rate him the greatest genius of all time in many of the individual intelligences too. He was almost entirely self-taught, and provides a tremendous example to us of just what someone can achieve with the determination to expand and develop all of his intelligences.

Contrary to many assumptions, Leonardo was not from a wealthy, well-to-do family, and his formal education was very basic. When he was a boy, he was apprenticed to a painter/sculptor, in whose workshop he learned his craft of drawing and painting.

Leonardo himself said that he became the 'genius' that he was because of the application of his brain to learning how it – and especially his sense – worked. As you read this book, constantly bear Leonardo in mind, and realise that the person we hold up as the ultimate genius became so because he worked at it. Leonardo was very proud of the fact that he was self-educated, and he used to purposely sign himself as a 'Disciple of Experience'.

Let's take a look at the multiple intelligences, and see how Leonardo fared in each one.

Leonard was astonishingly creative. He created immortal works of art, sculpture and countless other original ideas. In addition to his artistic skills, Leonardo was also an exceptionally accomplished musician. If you gave him any stringed instrument, even one that he had not seen before, he could very quickly 'work it out' and play both known and original music on it. Leonardo was known for exuding a deep self-confidence. He loved his own company, and cared for and looked after himself as only a best friend or lover would. He was also very skilled in social intelligence: he was the most popular guest at all the parties and social gatherings in Florence. He was masterful at playing the fool, could mesmerise audiences with his story telling, and used his vast musical ability to entertain his fellow guests – spontaneously composing and playing songs while they stood amazed.

Leonard's fascination and love of nature and the natural, living world is well known. He considered nature to be a manifestation of God, and was exceptionally kind to animals. The story was often told how he would go into the marketplace, buy a cage of birds (they were sold either for their song or to be eaten) and in full view set all the birds free, watching with enchantment their flight patterns as they soared ecstatically in their new found freedom.

The assumption that someone cannot be both intelligent and strong is completely refuted by Leonardo. He was known for his extraordinary stamina and energy, and had a reputation as the strongest man in Florence. He was also incredibly attractive. The historian Vasari reported that Leonardo's poise was so perfect, his movement so sublime, and his appearance so astonishingly beautiful, that people would line the streets of Florence simply to see him walk to his workshop. He was like a modern day sex god.

Leonardo particularly developed his sensual intelligence (obviously important to an artist), and he used to exhort those around him to develop all of their senses too. He developed his visual powers to such an extent that at times his observations bordered on the miraculous. It is reported that he was the first person to see, with his naked eye, the moons of planet Jupiter, and in his Codex on the Flight of Birds, he recorded details which remained unconfirmed until the invention of photography 350 years later proved him to be right!

Numbers were a natural part of the harmony of the universe for Leonardo. He used numbers as a basic thinking tool for measuring and calculating in all his fields of activity – art, design, engineering and invention. Pouring forth from Leonardo's unbelievably prolific mind were new designs for aqueducts, locks and dams for rivers, inventions for underwater craft and for flying machines, and hundreds more engineering ideas that had never been thought of before.

Because he had studied so many fields of activity, Leonardo's vocabulary was many times greater than the average. Because of his massive imagination, he was able to combine the two to produce the most beautiful musings and descriptions. Many of his literary notes are portraits created not with paint but with words.

Leonardo is the ideal model for you as you read through this book. Bear in mind that he was a child, just like everyone else, who had the fortune and ability to tune into his own intelligence, and literally, to put his head first.

list of Mind-Maps®

Summary Mind-Map® of Chapter 1 in which the main branches show the key words and images for the main ideas contained in *The Power of Creative Intelligence*.

Summary Mind-Map® of Chapter 2 with the central image emphasizing the left/right brain topic. The main branches show the characteristics of the two hemispheres, and indicate the ways in which you can use this knowledge to enhance your life.

Summary Mind-Map® of Chapter 3. This Mind-Map® summarizes itself! It is a Mind-Map® on Mind-Maps® and why they are superior to traditional note-taking. It also shows some of the many ways in which they can be used to improve your thinking skills and the muscles of your mind.

Summary Mind-Map® of Chapter 5. This Mind-Map® summarizes your natural musical skills, the great musicians covered in the chapter, and some of the main ways in which you can improve and develop your Musical Creative Intelligence.

Summary Mind-Map® of Chapter 6. This Mind-Map® includes the great thinkers to whom you are introduced in this chapter, more information on the left/right brain, gold-mining your mind, and many ways in which you can increase your Productivity Power.

Summary Mind-Map® of Chapter 7. This Mind-Map® summarizes the three main ways in which you can increase your Creative Flexibility and originality. It also summarizes the Creativity Workout exercises that enable you to gain strength in this area.

Summary Mind-Map® of Chapter 8. Chapter 8 introduces you to the astonishing associative power of your brain. This Mind-Map® summarizes this, compares your brain to the Universe, and shows the many games you can play to increase your Associative Power.

Summary Mind-Map® of Chapter 10. This is a fun Mind-Map® looking at Creativity and life through the eyes and brain of the ultimate Creative Genius, the Child. Each branch summarizes one of the main Creative Genius characteristics of the child.

introduction: beginning your creativity journey



chapter one

do you/did you/are you/would you?!

How creative do you think you are? To get some (probably surprising) idea of your own creativity, consider the following questions, and ask yourself:

- 1 Do you daydream? YES/NO
- 2 Do you plan menus and cook meals for yourself, your family or friends? YES/NO
- 3 Do you mix and match colours, fabrics and accessories when buying clothes to create your own unique style? YES/NO
- 4 Do you like many different kinds of music? YES/NO
- 5 Do you remember with pleasure, highlights of your life, including special times spent with friends, great sporting moments,

outstanding holidays, any significant 'disasters' or triumphs in your life? YES/NO

- 6 Did you ask lots of questions when you were a child? YES/NO
- 7 Do you *still* ask lots of questions? YES/NO
- 8 Do you sometimes wonder at the complexity or beauty of things, and wish you could figure out how it works/was made/came about/came into your life? YES/NO
- 9 Do you have sexual fantasies? YES/NO
- 10 Do you have newspapers, magazines or books in your home that you have promised yourself you would read, but for which you have not yet managed to find the time? YES/NO
- 11 Are there other things in your life you have promised yourself you would do or accomplish, to which you have not yet got around? YES/NO
- 12 Are you moved or excited by superlative performances in the fields of music, sports, acting or the arts? YES/NO
- 13 Would you say 'yes', if I could wave a magic wand and suddenly:
 - make you a fit, flexible and superb dancer, able to 'wow 'em' at any dance function? YES/NO
 - gave you a voice equal to your favourite singer, able to sing virtually any song to your own satisfaction and to the pleasure and amazement of others? YES/NO
 - make you a competent artist, able to rattle off cartoons and sketches, landscapes and portraits, and able to sculpt so well that Michelangelo himself might consider you a worthy student? YES/NO

- make you a great story and joke-teller, able to mesmerize and enchant people with your tales, and able to reduce them all to helpless laughter with your brilliant jokes? YES/NO

14 Are you alive?!! YES/NO

If you answered 'YES' to more than half these questions, then you are, by definition, **Creative**.

Just how creative will be revealed as you continue your journey through *The Power of Creative Intelligence*. But to give you some indication, let's look at a couple of the questions that may have seemed a bit strange:

- **Do you have newspapers, magazines or books in your home that you have promised yourself you would read, but for which you have not yet managed to find the time?**

Over 95 per cent of people answer 'YES' to this question, thinking that it means that they are merely very good at procrastinating! They *are* – but they are also very creative! Think about it. Every day, for weeks, months or years, their brains have been *creating* the most fantastic excuses for *not* getting down to reading. It is irrelevant that their creativity is directed towards not doing something – it is still exceptional creativity, and is such a limitless power-source that it can sometimes go on for a lifetime!

Which brings us to the question:

- **Are you alive?**

This may seem somewhat obvious, but the question conceals a deep and meaningful truth. Every day of your life, if you are to survive that day, your amazing brain has to create tens of thousands of thoughts, actions and solutions to problems that, if it did not, would end your time on this earth. The mere fact that you are *alive* proves that you are abundantly creative.

Increasing and releasing the gigantic Creative Intelligence you possess is simply a matter of understanding how it works and how to develop it. This little book will show you how.

what is creative intelligence?

Your Creative Intelligence is your ability to come up with new ideas, to solve problems in original ways, and to stand head and shoulders above the crowd in terms of your imagination, your behaviour, and in your productivity.

Your Creative Intelligence includes a number of factors, *all* of which can be taught and developed so that you can increase your creativity. *The Power of Creative Intelligence* will introduce you to each one of these factors in turn, and will show you how to develop and enhance them. These factors include:

- 1 **The Left/Right Brain.** The ability to use, in conjunction with each other, the different skills of the left and right sides of your brain.
- 2 **Note-making/Mind-Mapping®.** The ability to 'make your thoughts visible' by getting them out of your head and on to paper, so that you can explore them more fully.
- 3 **Fluency.** The speed with which you can rattle off new ideas. Fluency is the measure of your creative productivity.
- 4 **Flexibility.** Your ability to produce different kinds of ideas, and to shift from one approach to another using a rich variety of strategies, constitutes your creative flexibility. Flexibility includes your ability to see things from different angles, to consider things from other points of view, to take old concepts and rearrange them in new ways, and to reverse pre-existing ideas. It also includes your ability to use *all* your senses when creating new ideas.
- 5 **Originality.** Originality is one of the essences of Creative Intelligence and creative thinking. It represents your ability to produce ideas that are yours alone – that are unusual, unique and 'eccentric' (i.e., 'away from the centre').
- 6 **Expanding on Ideas.** The good creative thinker takes a central idea and builds on it in all directions, developing, expanding, embroidering and generally elaborating the original thought.
- 7 **Association.** The creative thinker makes use of the fact that the human brain is a giant 'Association Machine'. Having some intuitive knowledge of how this Association Machine works (and *you* will have some very explicit knowledge, having read this book!), creative thinkers are able to tap into this infinite resource to improve all aspects of their Creativity.

an overview of *the power of creative intelligence*

The Power of Creative Intelligence is designed to take you on a Grand Tour of Creativity, showing you how you can expand and increase the power of your Creative Thinking at each stage of your journey. The following chapters contain potted case histories and stories of individuals who have exemplified the qualities being discussed. There is also a Creativity Workout in each chapter, where you can try your hand at specific exercises designed to make you smarter. Each exercise, while developing the specific Creative Intelligence skill area for which it is designed, will (thanks to the way the brain is an infinitely expanding and inter-connecting association machine!) simultaneously develop the mental muscles of your other Creative Intelligence skill areas.

The chapters also explain how you can use Mind-Maps® to develop your Creative Intelligence, and give examples of those ultimate creativity-enhancing thinking tools, which I have spent my life developing. There are also many other diagrams and illustrations that use the principles of Creativity to help you improve yours.

Here is an overview of the rest of the book.

Chapter 2 – Using Your Magical Left and Right Brains

In this chapter I will take you on a supersonic flight over the past 50 years of research into this fascinating aspect of Creativity. You will discover new insights into the nature of Creative Intelligence, and will learn how to use these insights to develop dramatically your creative thinking.

Chapter 3 – Infinite Creativity – Mapping Your Mind with Mind-Maps®

This chapter introduces you to the ultimate Creative Thinking tool, the Mind-Map®. I will show you how to become a master-user of what has been termed the ‘Swiss army knife for the brain’.

Chapter 4 – You the Creative Artist

Who said that you can't draw? You can!

Here I will explore with you the reasons why over 99 per cent of people will claim that they can't draw, and why they are mistaken. I will then introduce you to the two ultimate art teachers: Leonardo da Vinci and Michelangelo. Each of them worked out his own superbly simple and successful creativity methods that you can use to find the artist within you. You will also discover that, so far in your life, you have created millions of masterpieces of which you have been unaware!

Chapter 5 – You the Creative Musician

As with art, most people assume that they are not ‘musical’ and more than 95 per cent of us are convinced that we cannot sing a song in tune. As with art, this is not true.

In this chapter, I will explain to you why these false beliefs exist, how you can overcome them and how to release the naturally creative musician within you. You will discover that you have been singing well for most of your life, and that there are some extremely encouraging lessons you can learn from the birds!

Chapter 6 – Creative Productivity – The Power of Volume and Speed

Your creative productivity – the number or fluency of ideas you can generate in a given time – is a major factor in Creative Intelligence. In this chapter I will show you how you can increase your own productivity by following the methods used by the great creative geniuses.

Chapter 7 – Creative Flexibility and Originality

The prime reason people get stuck in their pursuit of creativity is that they have been taught to think in only one basic way. This becomes a hole out of which it is difficult to dig themselves. In this chapter I will show you many techniques for seeing with ‘fresh eyes’ – for looking at things from different angles and from many diverse points of view; techniques that all the great creative thinking geniuses used to trigger their world-transforming ideas.

How often do you hear people saying of a great creative genius that he or she is ‘one of a kind’; ‘a one off’; ‘unique’; ‘incomparable’? This quality of uniqueness is a cornerstone of creative thinking. I will demonstrate that you are already much more unique than you think, and will show you ways of developing your originality that will amaze both you and your friends.

Chapter 8 – Your Brain: The Ultimate ‘Association Machine’ – Expansive and Radiant Thinking

Creative Intelligence is based on your ability to make associations between many different thoughts and ideas. The average person makes *far* fewer associations than are possible. In this chapter I will

guide you through an enthralling association game; as it progresses, you will increasingly realize new ways to develop your own powers of association, and will discover something amazing about your brain's ability to make connections.

Chapter 9 – You and Shakespeare – Poets Both!

For many people poetry, like painting and music, is a 'special art' that is the precious privilege of only a very few gifted individuals. This is a romantic and false belief. *You* are a poet!

In Chapter 9 I will guide you back to your poetic soul, showing how you can apply all the lessons you have learnt so far from *The Power of Creative Intelligence* to produce your own poetry.

Chapter 10 – Only Kidding

Why is it that children are the best and fastest learners? Why is it that children are considered to be more creative than adults? Why do so many of the great artists (like Picasso, for example) try to 'get back' their childhood creativity?

In this chapter I will answer all those questions, and show you how to rediscover the child and the creative genius within you.



Throughout *The Power of Creative Intelligence*, you will have one other special guide: Leonardo da Vinci – voted the greatest Creative Genius of the last millennium!

using your magical left and right brains



chapter two

In this Chapter you will be given state-of-the-art information about your left and right brains, and how you can combine the two sides to multiply, phenomenally, your Creative Power.

We are going to go on a supersonic flight over the past 50 years of research on the brain. The journey starts in the laboratory of Professor Roger Sperry in California, and describes the research that won him a Nobel Prize in 1981, and which will make you delightfully aware of hidden creative capacities waiting to be unleashed by you.

In the 1950s and 1960s, Professor Sperry was investigating brainwave function. To explore different thinking activities and their effect on the brainwaves, Sperry and his colleagues asked the

volunteers to perform different mental tasks, ranging from adding and subtracting numbers in their heads, through to reading poetry, reciting memorized lines, doodling, looking at different colours, drawing cubes, analysing logical problems and daydreaming.

Sperry had predicted that the brainwaves would be somewhat different for different activities, and he was correct. What he had *not* predicted – and this finding changed forever the way we think about the potential of the human brain and its ability to think creatively – was the following startling revelation: on average, the brain divided its activities very distinctly into ‘left brain’ (left cortex) activities and ‘right brain’ (right cortex) activities. This is the research that has become popularly known as the ‘left/right brain’ research.

The dominant division of labour was as follows:

Left brain

Words

Logic

Numbers

Sequence

Linearity

Analysis

Lists

Right brain

Rhythm

Spatial Awareness

Dimension

Imagination

Daydreaming

Colour

Holistic Awareness

Sperry also discovered that when the right cortex was active, the left tended to go into a relatively restful or meditative state. Similarly when the left cortex was active, the right became more relaxed and calm.

Furthermore, and this came as a real surprise (as well as a beacon of hope), *every* brain involved in this brainwave experiment was shown to have all the cortical skills in fine working order. In other words, at the basic physical, physiological and potential level, *everybody* had a massive range of intellectual, thinking and creative skills that they were obviously using only in part.

By the 1970s, these results had led to an explosion of further researches, studies and surveys around the nature of this untapped potential.

One obvious line of investigation (with which I was personally involved) was to survey people on what they thought about their own abilities, and then to check these perceived abilities/disabilities with their real brainwave-measured capacities.

Here is one survey for you to try yourself.

Left/Right Brain Self-check

Would you find it virtually impossible (almost *genetically* impossible) to calculate quickly and accurately, the proportion of interest to capital still owing on your mortgage, for example, or the area of your garden as a proportion of the total area of your house and garden? YES/NO

Would you find it virtually impossible to draw portraits that

looked like the person being drawn, to paint landscapes, master dimension and perspective, understand the history of art and make realistic and abstract sculptures? YES/NO

Would you find it virtually impossible to compose music and songs, identify different classical composers by just a few notes from their works, dance to music in time, and sing songs where every note you sang was the note as it should have been sung? YES/NO

You will probably be relieved to know that over 90 per cent of people surveyed were confident that they were *genetically* incapable of accomplishments in these three vital areas of numerical, artistic and musical skills.

You will hopefully be pleased and encouraged to know that they were all *wrong!*

Subsequent research discovered that when people were trained – by good teachers – in those areas of skill that they had assumed to be weak, they suddenly became much stronger in those areas. It was very much like identifying a weak muscle group that was weak not because the muscles themselves were fundamentally incapable, but simply because they had not been used for a long time.

This was not all: in addition to everyone being able to develop areas that they had previously considered weak, another amazing finding soon began to emerge. With the new ‘mental muscle’ now in place, the other ‘mental muscles’ all began to improve their performance.

Thus, for example, if people who had been weak in imagery and art, were trained to be competent in that field, they suddenly became more skilled with words, more able to manipulate numbers and, generally, more creative. Similarly, if people who had been weak in numerical ability were trained to strengthen this area, their imagination and musical abilities also improved.

What appeared to be happening was that the left and right sides of the brain were having 'conversations' with each other. The left brain would receive information and send it over to the right brain, which would process the information in its own way, and then send it back to the left side, and so on. By this process the brain was synergetically building up information, and adding to its own intellectual and creative power by combining the different elements. By the early 1980s, the left/right brain paradigm was becoming known around the globe, and books were beginning to be written about this extraordinary discovery.

Then came the difficulties.

problem number 1

You may have heard that the left-brain activities were generally labelled as 'intellectual', 'academic', or 'business' activities, and that the right-brain activities were correspondingly labelled the 'artistic', 'creative', and 'emotional' activities.

However, if all this research is true, and if by using both sides of

our brains our overall intelligence and creativity rises, then by definition the great creative geniuses must have been using the same mental process – and their whole brains. But if the above labelling of the right and left activities of the brain is correct, then academics and intellectuals such as Isaac Newton and Albert Einstein would have been ‘left brained’, and musicians and artists such as Beethoven and Michelangelo would have been ‘right brained’ – in other words, they would not have been using all of their brains at all!

More research was obviously required to shed light on this growing controversy. I and a number of other passionately curious individuals began to gather data on the great creative geniuses, and to relate it to the left/right brain model.

What do you think we found? We discovered *this* about ‘left-brained’ Einstein:

Case History – Albert Einstein

Albert Einstein was nominated as the greatest creative genius of the 20th century. However, he was a poor student, preferring day-dreaming to studying, and was eventually expelled from school for being a ‘disruptive influence’.

As a teenager he became inspired by the imaginative side of mathematics and physics, and was equally interested by the work of Michelangelo, whom he studied in depth. These mutual interests encouraged him to play even further with his imagination, and he

developed his now-famous ‘Creative Mind Games’ in which he posed himself an intriguing question, and then allowed his imagination to run riot.

In one of his most famous Creative Mind Games, Einstein imagined that he was on the surface of the sun, grabbing a sunbeam, and travelling directly away from the sun at the speed of light, to the very ends of the universe.

When he came to the ‘end’ of his journey, he noticed to his astonishment that he was roughly back where he had started. This was logically impossible: you don’t go in a straight line forever and end up where you started!

Einstein therefore took another imaginary sunbeam ride from another part of the sun’s surface, and again went on a straight-line journey to the end of the universe. Once again he ended up relatively near where he had started.

Slowly the truth dawned on him: his imagination had told him more truths than his logic. If you travel in straight lines ‘forever’ and continually return to the vicinity of where you started, then ‘forever’ must be at least two things: curved in some way, and possessing a boundary.

This was how Einstein came to one of his most profound insights: our universe is a curved and finite universe. He did not come to this giant creative realization by left-brain thinking alone, but by combining his knowledge of number, word, order, logic and analysis with his massive imagination, spatial awareness and ability to see the whole picture.

His insight was a perfect blending and conversation between both sides of his brain. It was a perfect 'whole-brained' creative realization.

The same turned out to be true, in reverse, for the 'right-brained' creative geniuses. Let us take, for example, the 'ultimate' right-brainer, Ludwig van Beethoven.

Case History – Ludwig van Beethoven

Beethoven is known for his turbulent, questioning and passionate spirit, for his desire for freedom from tyranny and censorship and for his ongoing fight for freedom of artistic expression. He is generally accepted as the 'perfect' example of the wild and untamed model of genius.

All of this is true, and fits in with the traditional interpretation of the right-brained creative genius. However, what has escaped most people's attention is that Beethoven, like all other musicians, was also incredibly left-brained!

Consider the nature of music: it is written on lines, in sequence; it follows its own logic; and it is based on numbers. Music has often been described as the most pure form of mathematics there is (and it is interesting to note that many of the great mathematicians had music as their main hobby, and vice-versa).

As well as being passionately imaginative and rhythmical, Beethoven was also passionately meticulous. It was Beethoven who pioneered the use of the musical metronome, stating that it was a

Godsend to him because it would now mean that every musician and conductor in the future would be able to play his music at *precisely* the right rhythm, with *precisely* the right emphasis, and at *exactly* the right mathematical tempo!

As with Einstein, Beethoven was neither right-brained or left-brained. He was completely and creatively *whole-brained*.

My research into the great creative geniuses confirmed that they all used the ‘whole brain’ – the full range of their cortical skills, where each skill supplemented and supported the others.

These findings shed light on the second big problem with the research and its assumptions.

problem number 2

The second problem was a major one. The left brain ‘intellectual’ activities tended to be labelled ‘male’ activities, and right brain ‘creative’, and ‘emotional’ activities came to be seen as ‘female’ activities. This was comprehensively and dangerously wrong!

These labels simply extended and ‘confirmed’ the centuries-old beliefs that:

- academics, education and intellectuality involved only words, number and logic and not imagination, colour and rhythm

- business was a place for strict order only
- men were logical, rational individuals with no emotion, imagination or 'colour'
- women were irrational daydreamers
- emotion was not based on associative logic
- creativity and art were not 'proper' pursuits, and had no rationality or science behind them.

The tragedy of these misconceptions, which sadly are still common today and which *The Power of Creative Intelligence* will help to dispel, is that they blind the mind to the truth, and therefore diminish pleasure, experience and existence.

Unfortunately these misconceptions are especially prevalent in the arena of education. Because we assume that education has to be 'left-brained', we label those children who are energetic, imaginative, colourful, curious or given to excessive bouts of daydreaming as naughty, disruptive, hyperactive, slow or backward. We should instead be labelling them as potential creative geniuses just beginning to explore the range of their abilities!

Similarly many businesses have become stuck in the 'left-brained' rut, and as a result are destroying not only the synergy that comes from combining left-brain business practices with imagination and flair, but also their reputations and their bottom lines.

Consider also, in the context of this book, the global image of the artist. Surveys have shown that most people consider artists to be messy, untidy, dishevelled, weak in logic and memory, and lacking in structural and organizational skills.

Sadly millions of art students around the world try to live 'up' (it's actually *down!*) to this 'ideal' vision of the artist. As a result they reject words, number, logic, order and structure, and create only passing images in their minds.

left/right brain thinking in the 21st century

As the Century of the Brain begins, we now realize that *the creative brain is the whole brain*. Furthermore, we realize that our earlier acknowledgement of our labelling mistakes has led us to an awareness that our creative potential is even greater than we had thought.

A simple question and comparison will make this clear.

If we have been using only half of the skills of the brain, at what percentage efficiency have we been operating?

The immediate answer would appear to be 50 per cent. This indicates that we have been making ourselves into half-wits! However, even this is an overestimation, as a simple example makes clear.

If I said to you that I wanted to measure your efficiency at running, and in Trial 1 I allowed you to use 100 per cent of your body, including arms and legs. Imagine how you would do if I videoed your running style and then examined it for mechanical efficiency. Most of us would score pretty highly.

Imagine now that in Trial 2 I allowed you only 50 per cent of your operating potential, and tied your right hand and foot together, behind

your back. How would you do? You'd be flat on your face within a couple of seconds! Efficiency? Less than zero.

Why? Because the parts of your body are made to work *together*, and in so doing each part multiplies a thousand-fold the efficiency of the other.

It is the same with your brain. *When you use only one side of your cortical skills, your creativity is nothing in comparison to what it can be. When you use both sides, your creative potential becomes infinite.*

In the Creativity Workout that follows, and in the remaining chapters, I will explore methods of unleashing that infinite creative potential.

creativity workout

1 Use the Whole-brain Skills Set to Examine your Life

Check how many of your left-brain skills you normally use and nurture. Next do the same with your right-brain skills. Pay attention to any of those right or left-brain areas that you are neglecting and begin to exercise and strengthen them right away.

2 Education

If you have children, apply whole-brain thinking to their entire education, including school, social and home-life education. Try to help your children achieve a balanced education, in order that they may lead far more creative and fulfilled lives.

Not only that – apply the same principles to your *own* ongoing, life-long learning, so that *you* may lead a more creative and fulfilled life too.

3 Take Breaks

Surprisingly, whole-brain thinking demands that if you are going to be fully and truly creative, you must take regular breaks.

Think about it: where are you when you come up with those bursts of imagination, those solutions to problems, those great fantasies and daydreams? Most people's answers include some or all of the following:

- in the bath
- in the shower
- walking in the country
- before going to sleep
- while asleep
- upon waking up
- while listening to music
- on a long-distance drive
- while out running
- while swimming
- lying on the beach
- when 'idly' doodling

In what state are your body and mind at such times? Relaxed, and often alone.

It is in these rest-periods that the two sides of your brain are able to converse and communicate with each other, and when the vast well-spring of your creativity is allowed to express itself.

If you don't decide consciously to take these breaks, your brain will decide for you. Many 'hard working' (but not 'smart working') people report that, as the years go on, they become more stressed and their concentration begins to wander. This is actually a good thing, for it is their right brains insisting that a little bit of imagination and fantasy should be allowed in to balance an unbalanced state.

If you are in this situation and you continue to persist in pushing your left-brain-dominant lifestyle, your brain will make you take other kinds of breaks, ranging from losses of concentration, to mini-breakdowns in which you become unreasonably irascible, to full blown blow-outs where the only cure is ... rest and relaxation!

Do it consciously. Give your brain and yourself a break. Your Creative Intelligence will love you for it.

4 Go for Long Walks or Rambles

The Romans had a special phrase, *solvitas perambulum*, which can be roughly translated as 'solve it while you walk'. What they had realized, although obviously not in left/right-brain terms, was that if you take your brain for a walk, especially outside in the country, the steady rhythm of your limbs' movement, the regular rhythm of your heart pumping more strongly, doses of oxygen-filled blood flowing into your brain, and the feast that your eyes, ears and other senses have while you walk, all contribute to creative thinking and problem solving.

If you have a creative task or problem upon which you are working, 'Walk it Out' and you'll 'Work it Out'!

5 Be Creative in your Everyday Life

In the space below, list those areas in your everyday life that you think are creative, and those that you think are not creative. When you have finished, read on.

Creative

Not Creative

The ideal answer to the above exercise is that *all* aspects of your daily life are intrinsically creative, and that all of them can be enhanced by applying more of the full range of your left and right-brain skills. Consider the following everyday activities; they are all dependent upon Creativity:

- cooking
- decorating
- D.I.Y. and home improvements
- photography
- gardening
- route finding and map reading
- carpentry
- flower arranging
- budgeting for special events/expenses
- relationships
- gift wrapping
- letter and message writing
- setting a table
- arranging house plants
- looking after and training pets
- planning holidays and special events
- planning meetings
- playing football, or any other sport

Each one of these activities can be made more interesting and creative by adding the 'spices' of the left and right-brain skills.

In this creative arena, little things can mean a lot. Gathering shells and driftwood from a beach and displaying them in your home, or using it for wood-turning; making patchwork quilts from a multitude of scraps of otherwise useless material; decorating your dinner table by putting a flower on each person's plate and using shells from the beach from which to serve your salt and pepper; or finding new and different routes to get to work each week, are all things that take little effort, and which add immeasurably to the creative feel of your life.

Holiday times and seasonal celebrations especially, are wonderful opportunities for displaying your Creative Intelligence. Make it a Creative Feast with decorations, visual beauty and visual humour. Create your own cards and gifts to give to people, or plan a dinner party for your friends – the possibilities are endless!

6 Your Mastermind Group

All the great creative geniuses had heroes or heroines to whom they looked for inspiration. Alexander the Great had his tutor Aristotle; Julius Caesar had Alexander the Great; all the great geniuses of the Italian Renaissance had the examples of Classical antiquity; the Russian Empress Catherine the Great looked to Peter the Great for inspiration; Mohammed Ali had Sugar Ray Robinson; Isaac Newton had Socrates; Stephen Hawking had Isaac Newton, and so on, throughout the pantheon of genius.

The technique the creative greats used was to hold imaginary conversations with their heroes, asking them for 'thoughts' and

inspiration. This Creative Thinking technique can be used for pursuing mighty scientific and cultural goals, and it can also be used by everyone in their normal daily lives.

I have personally found this technique exceptionally valuable in my life, and have used it successfully for over 20 years. It has allowed me to be especially creative whenever I have encountered any major opportunity or problem. The way I use this technique is as follows: when confronted with a situation which requires help from my Mastermind Group of heroes and heroines, I select the ones who are most appropriate for the given situation and I then imagine what advice each would give me in order to take greatest advantage of the situation. I select my heroes and heroines for their unique creative approaches, for their energy and for their astonishing success, knowing that all of this will 'feed in' to me and my own Creative Thinking processes.

Members of my Mastermind Group on whom I regularly call for help are:

- Our Creativity guide Leonardo da Vinci, for his boundless Creativity and inventiveness.
- Queen Elizabeth I, for her ability to overcome astonishing odds, to be very flexible while at the same time being steadfast, and to learn with incredible rapidity.
- Buddha, for his deep exploration of the self, and for his ability to withstand the utmost suffering and deprivation.
- Mohammed Ali, for his astonishing originality and creativity,

combined with his representation and defence of a minority group.

- Morihei Ueshiba, the founder of the Japanese martial art of Aikido. In this art, the Aikido student is taught to turn any violence into tranquillity, while simultaneously remaining steadfast.
- The dedicatees of *The Power of Creative Intelligence*, who are my living Mastermind Group!

As you read through *The Power of Creative Intelligence*, select four or five of the historical greats for your own personal 'Mastermind Group'. Supplement this group with members of your family and friends whose powers of thinking, analysis and creativity you especially admire and respect. Whenever you have a situation or problem facing you, hold imaginary conversations with each of your internal geniuses, and imagine what answers and advice they would give you in this situation. You will be surprised (and sometimes stunned!) by the excellence of the results.

7 Play Einstein's Creative Imagination Games

On a daily or weekly basis, play an Einstein Creative Imagination Game. We have seen how Einstein would pose himself an interesting question such as, 'What would it be like to go for a ride on a sunbeam to the end of the universe?' Or, 'If I travelled at the speed of light away from somebody, would I be invisible?' Or, 'Does light bend, and if so, how do I know where the thing is that I am

seeing?’ He then let his imagination run riot with all the possible solutions, no matter how bizarre or crazy they might seem to be. Try it with one of your own areas of interest, and see what creative answers you generate.

8 The RIGHT Emphasis

As our schools, work and culture tend to emphasize the left cortical skills, particularly look at how you can integrate the right-brain skills. Think of three ways to add each right-brain skill into your everyday work and life – your life will become more enjoyable, as well as more efficient.

9 Use Both Sides of your Body

By using both sides of your body, you will use *both* sides of your brain. Learn to juggle, or use your non-dominant hand in your daily activities, such as combing your hair, brushing your teeth, dialling the phone, stirring a pan on the stove, writing, etc. You could also try eating using the cutlery the ‘wrong way round’!

10 Make Colourful ‘Brain-speak’ Mind-Map® Notes

Notes are your brain’s special way of communicating with itself. It is much easier for your brain to work on its creative thoughts, problems and memories by putting notes down externally than it is to keep them all ‘up in the air’ inside itself – just try calculating long division in your head without the aid of pen and paper!

When you are taking notes, use your right as well as your left brain, adding interesting focus to your notes by using colour, images, spatial

planning and visual rhythm. This note-taking technique is called a Mind-Map®, and this whole theme will be developed comprehensively in the next chapter.

infinite creativity -

mapping your mind with Mind-Maps®



chapter three

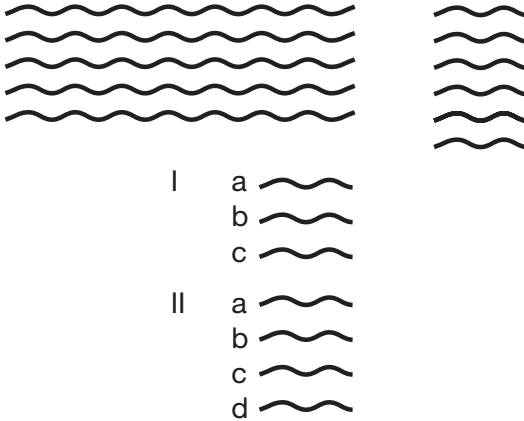
Releasing your Mind from its 'Non-Creativity' Prison

You may not have known it, but you stand over a 99 per cent chance that your brain has been in a 'non-Creativity' prison from the time you started school to the time you are now reading these words.

How can this be true?

Check and see. Simply ask yourself in what kind of way does your brain make its thoughts visible – in other words, what kind of notes do you make?

Are they like this?



Traditional note-taking styles

If you belong to that 99 per cent-plus of the world's population I mentioned earlier, then this is the way you will take notes: you will use words that are usually in sentences or phrases; you will list things; you may, in 'advanced' forms of note-taking, use numbers and letters to organize your thoughts; you will take notes in the linear order that the information is presented from either the book or the speaker; you will write on straight lines; and you will use a blue, black or grey pen or pencil with which to make those notes.

Could the way we have been taking notes for the last few centuries be the very reason why so many of us feel we are not as creative as we

somehow know we truly are? And could this also be the reason why the world at large generally misunderstands the nature of Creativity, while complaining about the lack of it?

Let's investigate this further.

First let's look at the blue, black and grey colours with which we usually make our notes. The reason why we do this is because we have been *taught* to do so (in my school we were taught not only to use one colour – blue/black – but also only to use one particular make of ink as well! Any child caught wandering from this strict order was likely to be given 25 *lines* of extra homework!)

How does your brain feel about all this?

To your brain, a blue, black or grey is a single (mono) colour (chroma). This means that the lightwaves that bombard your eye from that colour are all identical. To your brain, therefore, a single blue, black or grey colour is a mono (single) tone of information.

What word do we get when we combine the concept of 'mono' and 'tone'? *Monotone*. And if something is a monotone, we describe it as ... *monotonous*! And what word do we commonly use to describe something that is monotonous? *BORING!*

What does *your* brain do when it is bored? Most people come up with one of the following answers:

- tunes out
- turns off
- switches off
- goes dead

- daydreams
- drifts
- goes to sleep

Thus the current method developed for unleashing the productive power of the planet is actually boring creative minds to distraction and sending them to sleep!

Not only that: it doesn't matter what nationality you are or what language you speak. If you use English, Italian, German, Spanish, or Russian, your boring lines go left to right. If you use Hebrew or Arabic, your boring lines simply go from right to left! If you use Mandarin Chinese, your boring lines go up and down! Your brain doesn't mind in which go degree angle it goes to sleep – it can go to sleep in all of them!

Why does this happen?

Think about the tools your brain normally uses for its note-taking: words; lists; lines; numbers; order; sequence; letters – the mental skills of the 'left brain'.

So far so good.

In the space below, note what skills from the 'right brain' are used:

You guessed it – the reason why we have left no space for your answer is that the answer is 'none'! No images, no codes, no colours, no dimension, no 'whole picture', no visual rhythm and no spatial awareness.

In other words, our traditional note-taking methods only do half the job! It is time that we completed the task. Once again, it is clear that by

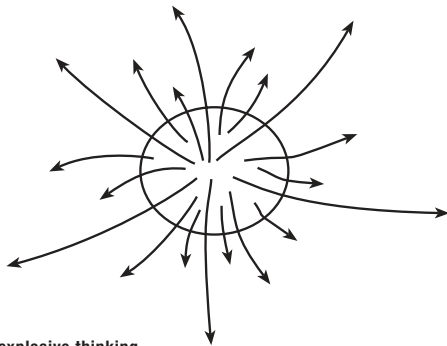
using only half of our skills we have, like the one-legged and one-armed runner, been operating with a fantastic lack of efficiency.

The lines on which we have been writing are the prison bars behind which we have trapped our fantastically creative brains.

Let's explore what happens when we allow our brains to make their thoughts visible in a way that is compatible with the way our brains actually think – and by now you know it's not in straight lines!

radiant thinking and proof of your infinite creative potential

Your brain does not, like the computer, think linearly and sequentially: it thinks *radiantly* and *explosively*, as is shown in the following diagram:

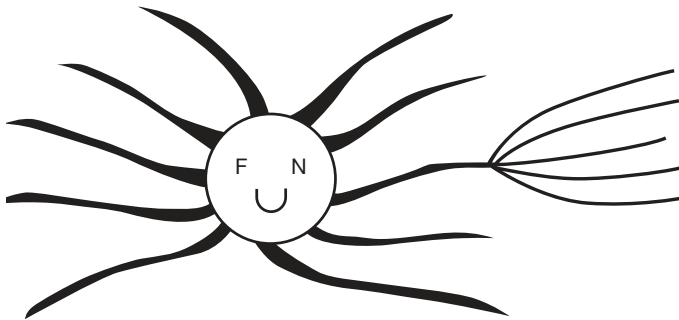


Radiant and explosive thinking

To show how radiant thinking works, try the following Radiant and Creative Thinking Game, which will change the way you think about the way you think for ever!

Below you will find the word 'FUN' nestled in the centre of a face. Five branches radiate away from the face, and off each of those branches radiate, much like a tree or a river delta, five more branches.

The game is as follows: on the five central branches, print the first five words that come into your head, one on each branch, whatever they are, when you think of the concept 'FUN'. When you have done this, go out to the next level of branches, and quickly print on each of the five lines, the five words that first come into your mind when you think of the key word on the main branch (again, one word on each branch). When you have filled in the first five key words and all the radiating branches, read on.



Were you able to do this exercise?

Of course you were!

Was it simple?

Of course it was!

Is it more significant than it might at first seem?

You bet it is!

Think about it. What your brain has just done is something quite profound. You took a single concept, 'FUN', and radiated from it five key ideas. Thus you multiplied your first creative output by five – that's a 500 per cent increase in creative output.

Next you took your five new, freshly created ideas, and from each of them you created five more new ideas. Another five-fold or 500 per cent increase! In no time at all you started from one idea, and created 30 new ones.

Now ask yourself: 'Could I create another five words/ideas from each of the 25 words that radiate from the original key five?' Of course you could! That's another 125 ideas created!

Could you add another five from each of those? Again, of course you could – another 625 ideas! *That's 6,250 per cent more ideas than when you started!*

Could you keep going to the next level? And the next? And the next and the next?

Of course you could!

And for how long?

Forever!

Generating how many ideas?

An infinite number!

Congratulations! You have just demonstrated, using a basic Mind-Map® technique, that your creative potential is infinite.

The news gets even better!

In the Radiant and Creative Thinking Game you have just played, you were still using, predominantly, your left brain. Suppose that the magical qualities of the right brain were added to your already proven infinite Creative Thinking capacity. Suppose that you added to the basic Mind-Map® form, using colours, more visual rhythm, images, pictures, codes, dimension and clever spatial arrangement? If you did you would be like the whole-bodied runner again, multiplying your abilities synergetically. You would be adding extra power, colour and dimension to what we already know is an infinite creative capacity.

creative Mind-Maps®

You have already done a basic Mind-Map® in the 'FUN' game. To create a fully-fledged Creative Mind-Map® is simple, easy and enjoyable:

- 1 **Start in the CENTRE of a blank page turned sideways.** Why? To give your brain the radiant creative freedom to branch out in all directions.
- 2 **Use an image for your central idea.** Why? Because an image is worth a thousand words for your creative power, and will both please your eyes and keep your attention focused.

- 3 **Use colours throughout.** Why? Because colour stimulates Creative Thinking, helps you distinguish areas of your creative thought, stimulates the visual centres of your brain and captures your eyes' attention and interest.
- 4 **Connect your main branches to the central image** and connect your second and third-level branches to the first and second levels, etc. Why? Because your brain works by association (see Chapter 8) and if the branches are connected on the page the ideas will connect in your head and spark off more creative thoughts. It also creates and sustains the basic structure, in the same way that your skeleton, muscles and connective tissue hold your body together.
- 5 **Make the branches curved rather than straight-lined.** Why? Because a Creativity Mind-Map® with straight lines is *boring* to your eyes! Your brain is far more attracted to the curved lines that you find in nature.
- 6 **Use one word per line.** Why? Because, as you now know from the 'FUN' exercise, each single word or image generates its own vast array of creative thoughts. When you use single words, each one is better able to spark new thoughts. Phrases or sentences tend to dampen this triggering effect. (Have a look at the Mind-Maps® in the plate section.)
- 7 **Use images throughout.** Why? Because images and symbols are easy to remember, and stimulate new, creative associations.

You now have the knowledge to use the most powerful Creative Thinking tool known to humankind – the Mind-Map®.

Michael Michalko, in his best-selling book *Cracking Creativity*, describes Mind-Maps® as the ‘whole-brain alternative to linear thinking’. He notes many advantages of using Mind-Maps®, including:

‘Activates your whole brain.’

‘A Mind-Map® clears your mind of mental clutter.’

‘Focuses on the subject.’

‘Allows you to develop detailed organisation of your subject.’

‘Demonstrates connections between isolated pieces of information.’

‘Gives you a clear picture of both the details and the big picture.’

‘Gives you a graphic representation of what you know about your subject, allowing you easily to identify gaps in your information.’

‘Allows you to group and regroup concepts, encouraging comparisons.’

‘Keeps your thinking active and gets you closer and closer to the ultimate answer in problem solving.’

‘Requires you to concentrate on your subject, which helps get information about it transferred from short-term to long-term memory.’

‘Reaches out in all directions and catches thoughts from any angle.’

the great geniuses and note-making

When you start Mind-Mapping®, you will be joining the pantheon of great geniuses who all used the major elements of the Mind-Map® guidelines to make their thoughts visible, and thus to help them and others make the great creative leaps forward in their disciplines. These geniuses include Leonardo da Vinci, voted 'The Brain of the Last Millennium'; Michelangelo, the great sculptor and artist; Charles Darwin, the great biologist; Sir Isaac Newton, discoverer of the laws of gravity; Albert Einstein, who discovered the laws of relativity; Sir Winston Churchill, the renowned political leader and author; Pablo Picasso, who changed the face of 20th century art; William Blake, the English visionary, artist and poet; Thomas Edison, the inventor of the light-bulb; Galileo, who turned the universe inside-out with his astronomical observations; Thomas Jefferson, the polymath and architect of the American Constitution; Richard Feynman, the Nobel Prize-winning scientist; Marie Curie, the double Nobel Prize-winning chemist and radiologist; Martha Graham, the great dancer and choreographer; and Ted Hughes, the late English Poet Laureate, regularly praised as the greatest poet of the 20th century.

You are in good company! Indeed it is thought by many that the entire Italian Renaissance was generated for the most part by great creative geniuses who escaped from their linear-thinking prisons. They made their thoughts and ideas visible, not only through lines and words, but also with the equally and often more powerful language of images, drawings, diagrams, codes, symbols, graphs, etc.

Case History – Leonardo da Vinci

For a perfect example of a great creative genius using the language of vision to generate thousands of brilliant ground-breaking ideas, you just have to take a look at the notebooks of Leonardo da Vinci. Leonardo used images, diagrams, symbols and illustrations as the purest way to capture, on paper, the thoughts that were teeming in his brain.

The heart of Leonardo's notebooks, which, because of the manifestations of the sheer creative genius that they contain, are among the most valuable books in the world, is his drawings. These drawings helped Leonardo to explore his thinking in fields as far-ranging as art, physiology, engineering, aquanautics and biology. For Leonardo the language of words took second place to the language of images, and was used to label, indicate or describe his creative thoughts and discoveries – the prime tool for his Creative Thinking was the language of *images*.

Case History – Galileo Galilei

Galileo was another of the world's great creative-thinking geniuses, who, in the late 16th and early 17th centuries helped to revolutionize science by using his own note-taking techniques. While his contemporaries were using traditional verbal and mathematical approaches to the analysis of scientific problems, Galileo made his thoughts visible, like Leonardo, with illustrations and diagrams.

Interestingly, Galileo was, like Leonardo, a great daydreamer. According to the now famous 'Legend of the Lamp', Galileo was idly watching the gentle swaying, to-and-fro, of the lamps hanging in Pisa Cathedral, when he had a 'Eureka' experience. Galileo realized that no matter what the range of a lamp's swing was, it always required the same time to complete an oscillation. Galileo developed this observation of 'isochronism' into his Law of the Pendulum, applying it to time-keeping and the development of the pendulum clock.

Case History – Richard Feynman

Richard Feynman, the Nobel prize-winning physicist, realized as a young man that imagination and visualization were the most vital part of the Creative Thinking process. As such he played imagination games, and taught himself to draw. Like Galileo, Feynman broke away from his more traditional note-taking contemporaries and decided to put the entire theory of quantum electrodynamics into freshly visual and diagrammatic form. This led to his developing the now famous Feynman diagrams – pictorial representation of particle interaction, which are now used by students throughout the world to help them understand, remember and create ideas in the realms of physics and general science.

Feynman was so proud of his diagrams that he painted them on his car!

Case History – Albert Einstein

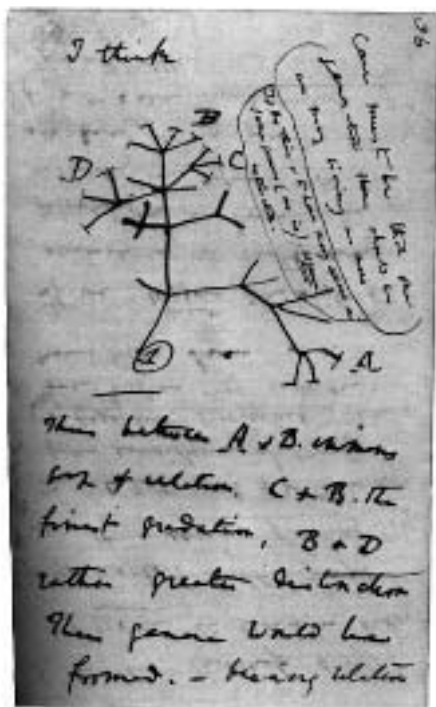
Albert Einstein, the Brain of the 20th century, also rejected the traditional standard linear, numerical and verbal forms of Creative Thinking. Like Leonardo and Galileo before him, Einstein believed that these tools were useful but not necessary, and that imagination was far more important. Indeed, it was Einstein who stated that: *‘Imagination is more important than knowledge, for imagination is limitless.’* Indeed, in a letter to his friend Maurice Solovine, he explained his difficulty in using words to express his philosophy of science, because he did not think in such ways; he thought more diagrammatically and schematically.

Case History – Charles Darwin

Darwin was a Mind-Mapper®! In developing his Theory of Evolution, Charles Darwin had a vast task in front of him: he had to explore as much of the natural world as possible; to classify each of the species and their relationships to each other; to explain the regularities and ‘irregularities’ in nature; to demonstrate the explosive and multiplicative nature of growth and diversity. How did he do this? With basic Mind-Maps®!

Darwin devised a basic Mind-Map® form of note, which was very much like a branching tree, and was almost identical to the ‘FUN’ exercise you did on page 40. Darwin used these basic Mind-Map® forms as the only effective way to help him collect masses of data, to organize it, to see the relationships between the various items,

and to create new awarenesses from it. It is reported that within 15 months of drawing his first tree 'Mind-Map'® diagram, Darwin had worked out all the major components of the Theory of Evolution.



Darwin's note-taking method

Armed with all your new Mind-Map® Creative Thinking knowledge, you are now ready for a Creativity Workout.

creativity workout

1 Use Colour in your Notes

Always use colour in your notes. Start off with a four-colour ballpoint pen, and move on to other colours as you progress. Colour makes your notes more interesting; it will stimulate your Creative Thinking processes, and will, literally, add colour to your life!

2 Daydream and Nightdream!

Both daydreaming and nightdreaming give your visual Creative Muscles added strength. Note, preferably in Mind-Map® form, any ideas or images from your best dreams. This will encourage you to be more visual and colourful in your Mind-Mapping® notes.

3 Think Radiantly

Once a week, take any word or concept that interests you, and do a 'FUN' game Radiant Thinking basic Mind-Map® burst. This will keep your Mind-Mapping® skills in shape.

4 Mind-Map®

Draw a Mind-Map® whenever you have a creative problem you wish to explore. Do it in the following stages:

- Do a quick Mind-Map® brainstorm, in just the same way in which you did the 'FUN' game brainstorm – adding colour, images and as much information as your brain wishes (see page 40). This exercise should be done at high speed.
- Let your brain 'think on it' for a while, giving yourself at least an hour's break.
- Return to the Mind-Map® and add any new thoughts you have had.
- Look at your Mind-Map® closely again, finding any new connections you can between any of the elements on any of the branches.
- Connect these elements by codes, colours or arrows.
- Identify the main new connections.
- Take another break to allow your brain to think on it again.
- Look at your Mind-Map® once more, and identify and mark any new connections you can now see.
- Return to the Mind-Map® and decide on your solution!

5 Keep Mind-Map® Notebooks

Another great creative genius who made visual Mind-Map®-type notes was Thomas Edison, and he did so because Leonardo da Vinci had!

Edison, who filed patent after patent after patent with the US authorities, was driven by a burning creative desire, and decided that the best way to fuel his own creative genius would be to follow in the footsteps of his hero Leonardo. Following Leonardo's example, Edison studiously and passionately recorded, with visual illustrations, every step of his Creative Thinking processes, and eventually amassed 3,500 notebooks.

6 Use Mind-Maps® as a Creative Communication Tool

If you have to make a speech or talk of any sort, use a Creative Mind-Map® to help guarantee a successful presentation of your ideas.

Regardless of whether your speech is a short thank-you speech after a dinner or celebration, or a full-blown formal business presentation, a Creative Mind-Map® has a number of advantages over the standard and normal linear, boring, monotonous, pre-prepared, often humourless presentations that make many people afraid to speak in public, and audiences to dread such events too!

By using a Mind-Map® you can free your mind (and yourself) to organize your thoughts quickly, put them in an appropriate order, and include all the key ideas and images that will spark your imagination when you get up to speak. This will help you to relax and talk naturally and spontaneously – to the relief and enjoyment of everyone concerned!

7 Mind-Map® and Create Your Future

For this exercise, place an image or symbol of yourself in the centre of your Mind-Map® and have as your main branches such topics as Skills; Education; Travel; Family; Job; Wealth; Health; Friends; Goals; Hobbies, etc. On this Mind-Map® create your ideal future – Mind-Mapping® the rest of your life as you would design it if a genie from the magic lamp had granted your every wish.

When you have created this ideal future Mind-Map®, set about making it come true, with the help of your Mastermind Group (see page 29). Many people have tried this ‘create your own life’ Mind-Map® approach

and have found it to be extraordinarily successful. Within a few years of creating their Mind-Maps® they have found that as much as 80 per cent of their plans have been accomplished!

8 Make an Image-only Mind-Map®

Make a Mind-Map® using only images – no words at all! Your brain will make different connections and associations when it is dealing only with images. You may be quite surprised at the new creative links and connections you make when you explore a topic in this way. (Try this exercise especially after you have read through Chapter 4, and have released the creative artist in you!)

9 Colour-code Your Mind-Maps®

Find four ways to use colour as a code in your Mind-Maps®. Build up ways that you can use colour and/or texture to show connections, layers of time or thought, people, actions, urgency, etc.

10 Explore How Using Mind-Maps® Can Help You in Your Life

Mind Map® all the ways Mind-Maps® can assist you – at home, at work, in all areas of your life. Keep building and extending this Mind-Map®. Add others' ideas on to yours as well!

you the creative artist



chapter four

Everyone (and that means *everyone*) is an artist by natural birthright.

Why is it, then, that over 95 per cent of people around the world believe that they are not truly creative or artistic, and that artists possess some special magical gift bestowed upon only a chosen few?

I have done surveys on this phenomenon across the world, with some surprising results. First, regardless of the nationality, race, age or sex of those people surveyed, the results were the same. Secondly, the answers given to the most important questions were always logical, and *always* wrong!

The most revealing question to ask those 95 per cent-plus who feel that they are not blessed with the gift of being able to draw and paint, is 'How do you know that you don't have this special ability?'

The usual answer, as you might suspect, is that they have tried,

failed, and therefore *proved* to themselves that this ability was not part of their set of mental skills.

What they had in fact 'proved' was that their first attempt at art had not produced the desired results, and not only that they needed to try again, but that they needed to be taught *how* to make that second attempt.

What happened in nearly every case was almost identical. No doubt you can put yourself into the story, as follows:

the death of the artist

Try to remember back to when you were four years old in your first school.

It is a lovely autumn day, and your teacher comes into the classroom and announces enthusiastically that today you are going to do your first lesson in art.

You are very excited, because your mind is full of wonderful images, and you can't wait to express them on paper, which you have in abundance, as well as lots of wonderful rainbow-coloured pencils and crayons with which to create your first masterpiece!

The teacher says, again enthusiastically: 'All right children, are we all ready? I want you to draw an aeroplane.'

In your mind's eye you can see the aeroplane clearly, but the technique for getting it out of your brain and onto the paper proves

to be a little more difficult. So at this stage, what do you, as a four-year-old, surrounded by your four-year-old friends each with their paper and coloured pencils, naturally do? You will, of course, look around to see what the other children are doing.

What will your teacher say to you when he or she observes you looking around?

‘Stop looking at other children’s work! That’s cheating!’

In my and my colleagues’ surveys, virtually everyone had a similar experience.

Now think for a moment about what actually happened to you at that stage. It was the same as if your parents had waited for you to finally get it all together to say your first word: ‘MAMA’, and had responded by saying: ‘We always knew you were going to be a cheat! Don’t use our language, make up your own!’

Of course no parent would ever be so foolish as to say this. Why? Because we all deeply and intuitively know that our brains learn first by copying. *Copying is the first essential tool in any learning. It is the way our brains acquire the basic building blocks of knowledge from which we can then add our own unique creativity.*

It is as true for art as it is for language.

Let’s return to your first art class, where you have just had your prime learning technique taken away from you.

Frustrated, you struggle vainly and disconsolately on, until the time is up. When you have ‘finished’ your work, you are then allowed to look around. And what do you see?

Better aeroplanes!

In fact, ironically, most children see better aeroplanes because they look at the worst part of their own drawings, and the best part of the others’ drawings.

At this stage your classmates might come around and help you in your realization that yours is not the masterpiece of which you had dreamed, and your Least Best Friend may say something like: ‘That’s not very good! It hasn’t got any wings!’ The pain and humiliation begin to gather momentum, and the budding shoot of your creativity already starts to wither.

Next comes more pain. For on the wall of your classroom, for the next two weeks, either is not your little aeroplane, and you are condemned by its absence, or (even more horrifying) *is* your little aeroplane, and you have to look at the blasted thing for two weeks. Its very presence reminds you every day of your incompetence, failure and the non-realization of your fantastic dream.

Sometime afterwards, your teacher comes into your class and announces: ‘Children, we are going to do art again today!’

And what does your brain say?

‘Nooooooooooooooooooooooooooooooooooooooohhhh
hhhhh **WAY!**’

Your brain will decide to flick pieces of paper or paperclips at

the children who did good drawings, to pass messages to your friends, or to watch the wonderful artistic and creative world outside the window, and daydream. Your brain will not want to do art. Why? Because it has already proved to itself that it cannot.

From that point on the wonderful and natural creative artist you are will increasingly go into hiding, never again wanting to have such a beautiful dream crushed.

The artist in you may be in hiding, but the dream is still alive, and it can take flight again now, just as it could have done then!

the rebirth of the artist

All that was necessary when you were four years old was for someone to say something like: 'That's an interesting little aeroplane! Would you like the next one to have wings on it?' And you would have said: 'YES'.

The ideal teacher would have then said something like: 'Well, all you have to do is do two little lines here, and two little lines there, and you have wings. And if you want to draw even better and more beautiful aeroplanes, go over there to little Charley, who has taught herself to draw wonderful aeroplanes, and ask her to show you how she draws them.'

If this approach had been taken, and had been continued, you would have learnt what is actually a very simple alphabet for learning

how to draw, and would today be a competent creative artist.

The rest of this chapter will allow you to rekindle the dream, and to perform tasks that will amaze you, your family and your friends.

Creative Art Game Number 1 (Accomplishing the Impossible)

In this creative exercise I am going to take you back once again to when you were four, and am going to re-start your career as an artist! To make sure that this is a fair, fresh start, *you are going to use the hand with which you do not normally write or draw!*

Why?

Because having never drawn with this hand before you will, literally, be starting completely anew.

The exercise is as follows. On page 62 you will see a number of squares, each labelled with a letter and a number, and each filled with lines of different lengths and angles, each square of the grid containing a very small number of these lines.

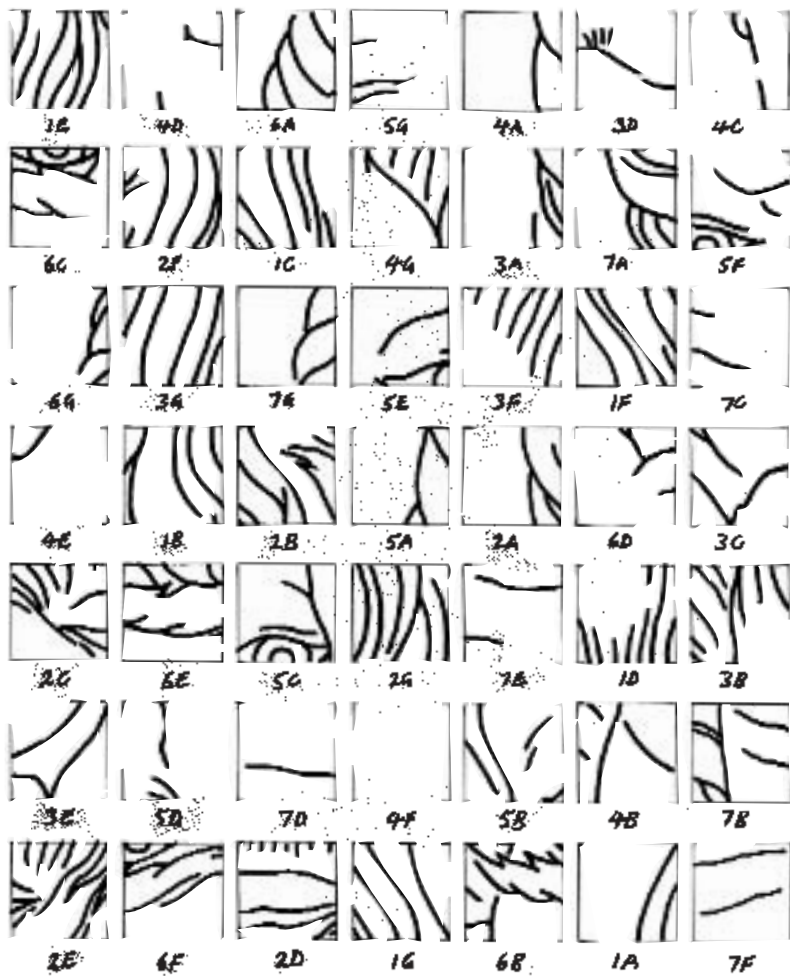
On the opposite page is a grid lettered from A–G and numbered from 1–7. Your task is, using the hand you do not normally use, to copy, very carefully the lines in each square onto the correct grid square. When you have finished, quickly check each square to make sure that you have it as near perfect as possible. Then, and *only* then, turn the book upside down and see what you have created! Afterwards, record your reactions in the space below.

Aren't you a Creative Genius?!! With your untrained, unused, 'weak' hand, you have drawn a reasonable likeness of the greatest creative genius of the last thousand years, Leonardo da Vinci!

How were you were able to do this?

Because, quite simply, your brain was using a method that you had never known before, and that is natural to all artists (like yourself) and all creative thinkers (again, like yourself!) This method is simply to allow the combination of your eye and brain to measure things, just as they are designed to do. When your brain is allowed to do this objectively, without any interference from thoughts such as: 'I'll never be able to do this'; 'I'm no good at art'; 'Art is only emotion'; 'I'm useless at drawing', etc., it sees purely, measures purely, copies purely, and therefore draws naturally in the way everybody can.

Think about it – the drawing you have just completed is the first drawing you have ever done with that hand. Just imagine what levels your art can rise to when you have had days, weeks, months and years to develop a skill which leaps out of the starting blocks at a first class level!



	r	b	z	u	n	h	r
m							
h							
h							
o							
h							
r							
h							

the artistic secret of the greats

Now for the next surprise ... the amazing artistic secret of Michelangelo and Leonardo da Vinci!

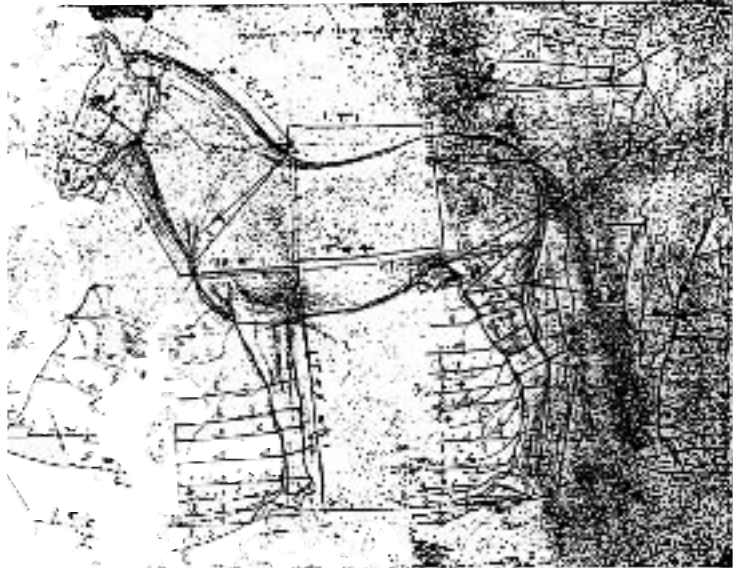


They did exactly the same thing as you have just done! They drew by first observing, and then by numbering and measuring. Look at the illustrations on these two pages. The first is Michelangelo's beautiful drawing of an athlete. If you look carefully, you will see that down the right side and to the lower left are a series of lines, markings and numbers. This was Michelangelo observing the human form like a scientist, measuring the proportions of the body, giving himself the line and number guideline, and then 'filling in' the blanks.

The second is a sketch by Leonardo, in which his method for arriving at the final form of a horse is made even more clear.

Leonardo segmented the legs into their constituent parts and, like you have now learned to do, divided the body into the basic art building-blocks – later on filling in the final, defining lines. Like Michelangelo, Leonardo was observing nature as a scientist does, using his eyes' natural talent for observation to produce work we now call masterpieces.

Both Michelangelo and Leonardo actively developed their powers of observation, and then 'drew by numbers'!



All the great artists did not suddenly and spontaneously draw. First of all they observed very closely what it was they wanted to draw, then they analysed and measured it, and then they 'copied' it from their mind's eye onto the paper. Indeed, Leonardo far preferred people to consider him a copier of nature than an ethereal, 'airy-fairy' 'artist'.

In your next Creativity Workout you will have the opportunity to develop your new-found skills, but first there is another amazing discovery for you:

You are such an amazing artist, you cannot NOT draw!

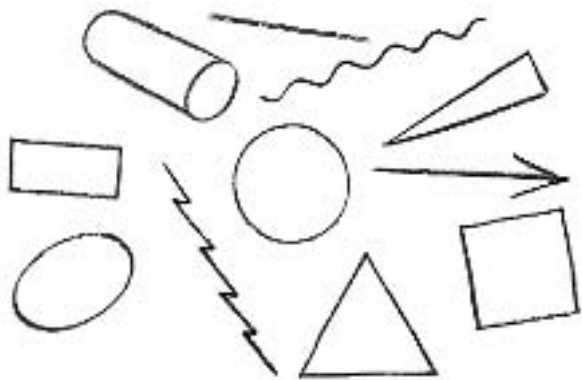
Creative Art Game Number 2

In this Creativity Game you will be given a number of building blocks for drawing, much like a child's wooden bricks.

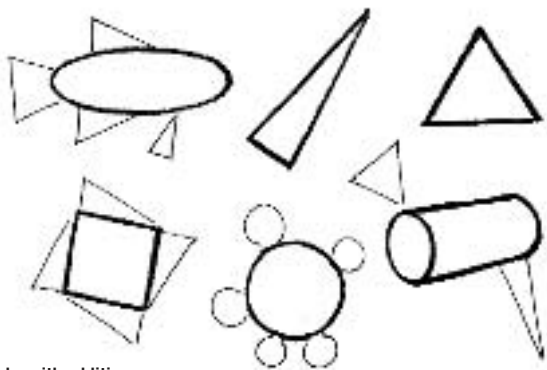
These building blocks are the simple forms of ovals, triangles, squares, rectangles, etc. The game is for you to start with any given shape of nature. These appear in the top diagram on the page opposite, and include circles, straight lines and curved lines, and to add any of the other shapes in any way you want, until your brain 'sees' a form of some sort emerging.

Using your basic artistic building blocks, complete the form in the way your brain desires. When you are doing this exercise, you are allowing your brain to use that amazing capacity it has when it looks at clouds, snow-covered landscapes, or patterns in wood and rocks and flickering flames, and 'sees' all sorts of forms that become animals, monsters, faces, or landscapes.

In the second diagram opposite you will find examples of six basic shapes, of which four already have a little bit of additional doodling added to them.



Basic artistic building blocks



Basic blocks with additions

If you wish you can add to any of them, or you can turn to page 73 and see how these particular doodles were continued by the artist. Sometimes the 'form' becomes obvious by moving the page around where the different angle and different perspective suddenly make the final picture 'click' into place.

You are now equipped with the knowledge that you are Creative, that you are naturally artistic, that you can even draw with the hand you have never used before, with the formulas of the greatest artistic creators of all time, and with the basic tool-kit for expanding your own vast artistic creative powers. It is now time for a Creativity Workout.

creativity workout

1 Doodle

On a clean sheet of paper, and using the basic building blocks described above, doodle with the basic shapes until each forms a recognizable image.

2 Learn the Creative Artist's Measuring Trick

Have you ever noticed when watching real artists at work, or when seeing films of the greats such as van Gogh and Michelangelo, that they are regularly doing something which seems very eccentric: holding pencils or paintbrushes up in the air with a straight arm, while flailing that arm about? You are about to discover how what they were doing helped to make them great, and how it can help you in your own creative development.

When you are with a group of people, or can see people at varying distances, take a pencil or pen, hold it at arm's length, and measure the 'size' of the various heads. Before you start measuring, estimate how much of the length of your pen or pencil that head will take up.

Here's how you measure: place the top of the pencil at the level of the top of the person's head. Then slide your thumb down the pencil from the top to the point where your thumb is level with the person's chin. As I mentioned, make sure you try this with people both near and far away.

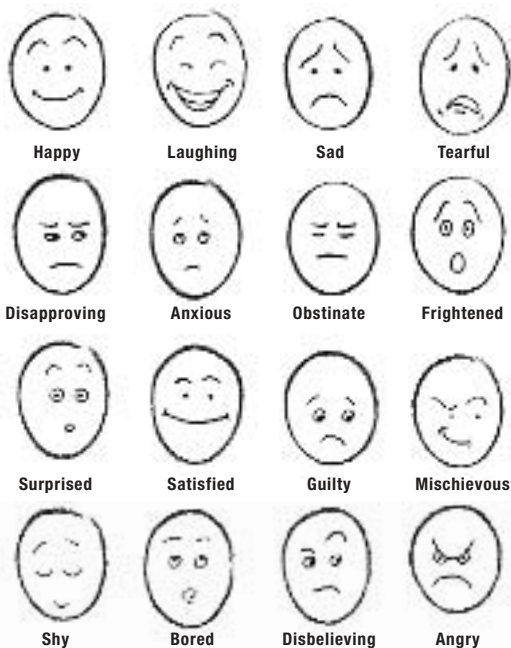
The results of this exercise will have introduced you to a scientific/artistic/creative seeing tool that was unknown to all the geniuses of Asia, India, the Middle East and Greece, being discovered only by those phenomenal flowering creative geniuses of the Italian Renaissance just 600 years ago.



Artists' measuring technique

3 Can you Cartoon? Of Course you Can!

Below you will see a number of cartoon figures that help to illustrate facial expressions. Simply copy them, measuring and comparing carefully as you go. If any of them are not as perfect as you would like, don't rub them out – keep them to compare later efforts with and, using your increasing knowledge, try doing them again after a few weeks.



4 Practise!

Practise drawing with your 'other' hand. Using both hands (ambidexterity) is a very good method of generally increasing your creative abilities. Use your artistic building-block kit to practise too. Once a week, doodle for 5–10 minutes with your basic artistic building blocks, thus keeping your Creative Artistic Muscle in good shape.

5 Join an Art Class!

Now that your artistic career has been restarted, browse through introductory books on how to draw, and consider joining drawing or painting classes, or take a painting holiday – they are both relaxing and inspiring.

6 Visit Galleries

Armed with your new knowledge of the 'Science of Art' visit art galleries and museums, and look with fresh eyes at the work of human beings who, just like you, had the ability to draw and paint, but who had the opportunity of having teachers who showed them the techniques you have just learned. They copied their teachers and the great masters before them. You copy them!

7 Learn How to See

Whenever Michelangelo or Leonardo went for walks, they would especially look out for interesting or beautiful faces, striking objects in nature, old buildings, etc. When they found something striking, they would observe it, close their eyes and try to 'picture it', and then observe it again. On the second observation, they would match their memory of what they had seen with the reality. They would repeat this

exercise until the memory was virtually the same as what they were looking at, and they could almost not tell whether their eyes were open or closed. Having thus seen (memorized) the object of their attention, they would go back to their studios and draw (record) it.

Try this incredibly interesting game yourself. You will find that as you repeat it, your ability to draw will improve, and so – equally importantly – will your ability to see and remember.

8 Go into an Art Shop and EXPLORE!

Find out where you might be able to take local art classes, browse through any interesting books or magazines and, most importantly of all, buy yourself a little sketchpad or notebook in which you can begin to jot down your creative ideas, especially in as many image forms as you can. In this way you will be following exactly in the footsteps of Edison and Leonardo!

9 Look!

If you have *any* doubt that you are a naturally Creative Genius, consider the following: run through the memories of every beautiful, magnificent, complex and extraordinary thing you have ever seen. If you are in a situation that is in any way interesting as you read this book now, look up and look around.

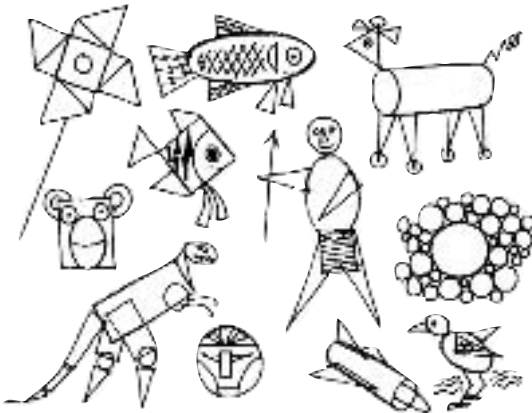
Because we use our eyes to see, and because reality is ‘out there’, when we look at things we tend to assume that *it* is simply out *there* and *we* are simply looking at *it*.

But if it were only ‘out there’, how would it ever get into our heads?

What actually happens is that your amazing eyes, with their 260 million light receivers, receive billions and billions of photons of light per second, all carrying images to you. Your eye then transmits these images down your optic nerve to the back of your brain, which then *re-creates* the entire external world *inside* your head.

In other words, for nearly every second of your waking life, the Master Artist in your Creative Brain has been painting perfect pictures of reality for you to admire. Every beautiful face, every snow-capped mountain range, every sunset and moonrise, every flower, every animal, every bird you have ever seen, you have perfectly *re-created* in your own brain.

You have already created and painted, my genius friend, billions of Masterpieces! Your hands simply want to join in the fun and create some more for you! Why don't you let them?



Completed doodles

you the creative musician



chapter five

Welcome to a chapter in which you will discover the reasons why the vast majority of the world's population believe that they are not creatively musical, and cannot sing. You will learn lessons from those master musicians, the birds, and will discover that you have been playing at least two very complex musical instruments for most of your life, and that you have 'created' thousands of musical compositions! Not only that, but in your Creativity Workout, you will learn how to build on the amazing capabilities you have.

Why is it that, as with the concept of Creative Art, 95 per cent of people surveyed around the world stated that they 'knew' they were not truly musical, and that musicians, like artists, possess some magical gift given only to the rare few?

As with art, people had tried to create music, and felt that they had

failed. But had they in actual fact failed? Or did they simply not know the secret of *naturally* creating music?

To get a better perspective on this, let's look at how the birds do it!

how birds make music

At the beginning of the last century, an extraordinary young Japanese musician by the name of Suzuki became intrigued with the problem of how birds actually learnt to sing.

In Japan, millions of people had beautiful songbirds in their homes, and as such there was a great demand for them. Suzuki decided that one of the best places to study the development of bird song would be to visit one of the bird breeding houses where tens of thousands of songbird eggs were hatched into little chicks.

Suzuki found to his surprise that the little chicks did not 'naturally' sing. They listened to a 'Master Singer' songbird that had been specially placed in the breeding house by the breeders; after many hundreds of trials the chicks eventually learned to sing just like the Master Singer.

In other words, as with art and the artist, the little songbirds had learnt to sing not by some magical happenstance, but by copying the best, and practising for many thousands of times before they themselves achieved mastery.

Suzuki had discovered a truth that applies to all bird brains, all animal brains and all human brains: singing and creative music-making are learned skills that are achieved by copying and constant working towards perfection.

Armed with this new knowledge, let's take a look back at the typical events that may have occurred when you (that Creative Musical Genius-in-the-making) were just starting out on your journey of creative musical development.

the death of the musician

Once again, imagine a time when you were a toddler.

It is a glorious spring day, and you are playing with your friends in a blossom-filled park dotted with sandpits, swings, climbing-frames and the like, and with people out walking their dogs, meeting friends and basking in the beauty of Spring.

The sheer beauty and exhilaration of the environment fills you with joy, and you and your friends rush about, experimenting with that fantastic musical instrument you are just beginning to discover: your voice. Each of you hits notes higher than any opera singer, finding how many ways you can produce each note, how

long you can hold it, how loud you can make it and how much you can vary it.

In the middle of this super-operatic symphony of sound, in which the dogs have enthusiastically joined, your mum and dad, and your friends' mums and dads, descend upon you and tell you not to shout, not to yell, not to scream and not to disturb other people. You learn that experimenting with your voice and exploring its extremes is bad and anti-social.

A little while later you are in your class and are so involved in your work that you spontaneously begin to hum and sing. You are immediately told to stop it, and to be silent while you work. You realize that music is to be disconnected from art, learning and productivity.

A few years later, with a growing fear about using your voice other than in the most controlled manner, you are tested in your music class. Standing in front of your class, you are subjected to a public examination. With your neck and throat muscles tensed, and your mouth dry from fear, you are asked to repeat a note played on the piano. You rasp an approximation. It is 'noted' that your pitch is not good, and that your voice is not up to the standard of a member of the school choir. As a result, whenever an important person visits the school, and the entire assembly has to sing the welcoming songs or hymns, you are told not to make a sound, but just to mouth the words!

Having had your musicality further restricted and crushed, you one day find yourself in the sanctuary of the bathroom, and while taking a shower you let loose with your favourite tune or song. From downstairs comes the 'unkindest cut' of all: the yell: 'Will you

please stop making that *horrible* noise!' You learn that even those you love are offended by your music.

All these 'objective proofs' will by now have convinced you that you are not musical, cannot sing and should not pursue such activities further. You have become a creative leper – 'unmusical'.

But is this really true? Are the proofs *really* proofs? Or is there overwhelming evidence to the contrary; evidence which already proves that you are a wonderfully creative and natural musician?

the rebirth of the musician

Despite all of the 'proofs' against your ability, in fact, musically *you* are a creative genius. What's more, there is plenty of evidence for this!

Proof Number 1: the Master Singing Birds

Let's return to Suzuki. Not only did he discover that songbirds learned from the Master Singers they copied; he found that *every* bird brain was able to copy the Master Singer. In other words, as long as the chicks had been allowed to copy and try repeatedly, mastery was not only easily accomplishable, it was simply the second, natural stage of learning. After the chicks had all reached this elementary stage (it is nice to think that mastery is elementary, isn't it?), each chick developed its own variations on the theme.

A bird's brain, in comparison to yours, is incredibly simple. If *its* brain can do it, so can yours. As long as your brain is allowed to copy a Master and to practise continually, it too can achieve a high standard.

Every Child can Play the Violin

Suzuki decided to put his theory into practice by teaching very young children to play the violin. He didn't give them books of musical notation, but simply allowed them to copy basic movements that he made on the instrument. He taught other teachers to do the same. It worked.

Today, at the beginning of the 21st century, *hundreds of thousands* of children world-wide have learned to play the violin and other musical instruments, including their voices, using Suzuki's methods. Not a single child has been found who cannot play well. The same technique has been applied to adults, with similar results.

The probability that you are the only person who could not so learn, is infinitesimal! You are a natural Creative Musician!

Proof Number 2: You Speak – Therefore You Sing!

Do you speak? Of course you do!

How did you learn? By copying others.

What did you copy? Sound, rhythm, beat, accent, cadence, words, volume, notes, movement, pitch, emphasis and pulse.

What do all these things constitute? *Music!*

If you listen to a crowd of people speaking a foreign language of which you know nothing, you will realize that they are all singing. The reason why so many of us think we can't sing is that, although we have been singing all the time, it was called something else: speaking.

Proof Number 3: You Already Play One Musical Instrument

Throughout your life you have been using a musical instrument – your voice! Your voice is a musical instrument of astounding complexity. It is comprised of your lips, mouth, tongue, larynx, throat, lungs, diaphragm, teeth, bones and all the cavities in your skull.

It is comprised of billions of working parts, and it makes the most sophisticated violin, guitar, piano, organ, synthesizer, or any other musical instrument pale into insignificance! And you have been playing and creating with it since the day you were born. You are a natural Creative Musician!

Proof Number 4: Your Second Musical Instrument

Not only have you used your vocal musical instrument for all of your life, you have used a second one too – your ear. Your ear is another astounding instrument of far greater complexity and sophistication than anything made by humankind. It comprises thousands of working parts, and is similar to your eyes in its creative capacity.

Every tune you have ever hummed, every song or aria you have ever heard, every pop or rock anthem or natural music to which you have danced or dreamed, every concerto or symphonic work that has held you enthralled, has been played and re-created by *you*.

In the same way that your eyes have helped you create your millions of artistic masterpieces, so your ears have been the instruments with which you re-created and re-re-created (remembered) every note of every song and piece of music that you have ever heard 'out there' and which your brain decided to re-create for its own vast musical library.

the great creative musicians: 'nature' or 'nurture'?

Popular mythology holds that the great creative musicians were 'born' musical; that they virtually came out of the womb composing!

Nothing could be further from the truth!

Case History – Ludwig van Beethoven

In 1770 Beethoven was born not a musician, but into a world of music.

Most of his relations were singers, pianists or instrumentalists, and his father was intent on providing him with the best musical education possible. As a result Beethoven studied under some of the greatest musicians of the age, including Haydn; 'the best help create the best'.

In the town where Beethoven lived, music was a constant presence, manifesting itself in the form of street musicians, festivals, musical evenings at concerts or in homes, and regular singing and playing in the local church.

Just in the same way that you learnt to speak the language of words, Beethoven, at the same pace as you and with the same dedication, learnt the language of notes. Just think how many hours your baby and child brain spent learning and practising language, *and* how many hours you spend each year using language – *that* is how hard Beethoven worked!

Case History – Wolfgang Amadeus Mozart

Like Beethoven, Mozart did not come into the world composing symphonies. He was the youngest son of Leopold Mozart, who was a professional musician – the Musical Director of the Archbishop of Salzburg, and an accomplished teacher.

Young Mozart learnt the language of music, day in and day out, from one of the best private tutors possible. Also like Beethoven, Mozart worked prodigiously hard at his chosen area of creative expression. It is reported that he would often work as many as 18 hours a day.

Case History – Johann Sebastian Bach

Johann Sebastian Bach, who like Beethoven and Mozart was a prodigious and prolific composer, is also often considered to have been a 'natural'. He was only a 'natural' if 'natural' equals 'worker'!

Bach was born in 1685 into a family that, again like Beethoven's and Mozart's, was comprised mainly of musicians. They all taught the young Johann, especially his elder brother Johann Christoph, the organist at Ohrdruf, who taught his young brother to play both the organ and the clavichord, and whose style Johann Sebastian copied.

The Bach family had a tradition of exchanging knowledge, and by the 1840s each had been teaching the other to the extent that the family numbered 70 musicians! This was not a 'genetic triumph'. It was a triumph of family tradition and mutual education, culminating in the young Johann Sebastian.

Bach used to give himself Creative Productivity goals – one of them was to write a cantata (a medium-length piece of music with solo voice and, normally, choral and orchestra parts) once a week, even when he was sick or exhausted. He is modestly reported to have said to his pupils: 'Anyone who works as hard as I did will do as well.' 'As hard as I did' meant between 10 and 18 hours of work a day for nearly 60 years – 328,500 hours in total!

We now have undeniable proof that you are naturally musically creative. It is time to go take part in the Creativity Workout for a thoroughly enjoyable musical session!

creativity workout

1 Sing!

Go back (or continue with even more gusto!) to singing in the bath and the shower! If anyone complains, ask them to help you improve!

2 Dance!

Dance is a natural expression of your natural sense of rhythm and incredible creative musicality. Try all forms from disco to aerobic (good for your brain and heart as well), jazz and ballroom.

Whenever you dance (and the more often the better) unleash more of your Creativity by experimenting with and learning new moves, rhythms and forms.

3 Get Yourself Another Instrument

Go into a music shop and browse. Consider buying yourself a simple musical instrument such as a tin whistle or a set of bongo drums. Didgeridoos are very popular. So too are guitars and keyboards.

Consider also expanding your own mental library of tunes, while at the same time increasing the sophistication of your musical-instrument-ear, by listening to music from different countries. You will soon realize how incredibly musically creative the whole world is. This will reinforce your awareness that everyone is musical, and that the forms of creative musical expression are infinite.

4 Expand Your Boundaries

You should realize that what you *think* creates your reality and your boundaries. If you think that you can't sing or play a musical instrument, you will not be able to. Your boundaries will be absolute. However, if you think that you *can* sing and that you have the potential to play something, you will be able to. Your boundaries will become infinite.

This principle is demonstrated most emphatically by the brilliant founder and conductor of the Boston Philharmonic Orchestra, Professor Benjamin Zander. Professor Zander has a unique and profoundly effective approach to the teaching of Creative Musicianship to advanced musical students.

At the beginning of the year, he welcomes them to their study course and announces, with appropriate musical rhythm and emphasis, that he already knows the marks they are going to receive at the end of the year.

As the students all listen intently, he announces joyfully: 'You are all going to get an "A!"' Professor Zander then adds: 'I guarantee that you are going to get an "A". Part of you getting that "A" will be that in the next two weeks you write me a comprehensive letter. You will imagine yourself having just graduated with a first-class degree in Creative Musicianship, and you will write in that letter why it was you were given an "A"; how many hours practice you put in; what your goals were and how you achieved them; what mistakes you made and how you corrected them; what advice you

took and how you applied it; what major lessons-for-life you learnt along the way; and how you are further going to advance your studies and career now that you have your first-class degree.'

Every student does as asked. Every student, having committed to the plan of action, follows it through, and every student achieves, and deserves, an 'A'.

Write yourself a similar note on how you are going to develop your Creative Musicianship!

5 Remind Yourself that you are a Creative Musician

Constantly remind yourself that you are a Creative Musician. Whenever you hear birds sing, remember that they learnt by copying and persistence. Whenever you walk or run similarly remember that you are playing 'Body Music'. Whenever you fidget or tap your fingers impatiently, realize that you are a percussionist! Every time you speak or have a conversation with a friend, remember that you are singing, often in duets and quartets.

When you get really mad over something, and start pounding the table, stamping your feet in time to the words that you are yelling (in a rising crescendo and with the rhythm punctuating perfectly your body movements), remember that every word was precisely as you wanted it; enunciated in exactly the way you wished; spoken at the precise volume you intended to maximum effect; pounded out at the precise beat and rhythm you desired; and controlled precisely in terms of pitch, content, syncopation and volume!

In other words, you were singing! And if Beethoven had been working with you, creating an entire crescendoing orchestra of brass, woodwind and strings, you would have been singing, *perfectly*, an original operatic aria! (Perhaps entitled *I Genitore Furioso* or The Irate Parent!)

6 Create Musical Opportunities

Now that you know you are a Creative Musician, take every opportunity to express your Creativity. Go to sporting events where you can sing the club songs, or national anthems. Go to Karaoke bars, and don't just sit and listen – get up and sing! No matter how bad you may think your first attempts are, persist and they will get better.

In clubs or at parties, sing along with the music being played. When you are at home sing along (or play along) with the radio, or your CDs, or join in with TV theme tunes.

If you have young children, have a musical 'jamming' session with them, with anything that can make musical sounds (keys, saucepans, wooden spoons, etc). The children will love it, and you will too.

7 Consider Taking Music Lessons

The simple rule for finding a teacher in this instance is to find one who:

- is qualified and practises well whatever instrument you are going to learn
- believes absolutely that you can learn whatever form of music you wish to learn, and will approach the task with energy, enthusiasm and a positive attitude.

Alternatively, try joining a local, friendly music group or bunch of singers. You will find the experience rewarding, uplifting and life-changing.

8 Pass on the Good News!

Now that you know the truth about the natural creative musicality of everyone, spread the good news!

If any of your friends or colleagues comes up with the old arguments about how they are not being musically creative, use the information you have learnt here to help them out of their lonely, monotonous and songless prisons. As you do, you will be surrounded increasingly by more and more singing, dancing and playing musicians. This will in turn make the whole of your life more of a symphony!

creative productivity -

the power of volume and speed



chapter six

Fluency in Creative Thinking refers to the number of ideas that you can create, and the speed at which you create them. Fluency is one of the main goals of all Creative Thinkers and of all the great geniuses.

This goal can itself create a problem – that of quality. What happens to the quality of your creative ideas if you start to speed up your thinking and generate greater numbers of ideas? Does the quality go down, stay the same, or go up?

The answer, surprisingly (and mercifully!) is that as the quantity and speed of the ideas goes up, the overall quality of ideas goes up too.

In other words, in Creative Thinking, you can have your cake and eat it too!

Let's take a look at the great Creative Thinkers, and see how this process worked for them. The sheer volume and productivity of some of these great thinkers is astounding:

- **Marie Curie** – this great scientist was not just awarded one Nobel Prize, but two – and in two different subjects as well, physics and chemistry. Her work ranged over the fields of magnetism, radioactivity and the development of the medical uses of x-rays, and she isolated the chemical elements radium and polonium
- **Leonardo da Vinci** – created so many ideas in so many different fields, that no one has yet counted them all!
- **Charles Darwin** – the creator of the Theory of Evolution not only wrote his 1,000+ page book on this subject; he wrote **119** other scientific papers, books and booklets
- **Thomas Edison** – registered **1,093** original patents, which is still the world record for the greatest number of patents registered by one person. He also completed **350** notebooks of work and ideas
- **Albert Einstein** – in addition to his masterful treatise on Relativity, Einstein published over **240** other scientific papers
- **Sigmund Freud** – wrote and published over **330** papers on psychology
- **Goethe** – the great German polymath and genius wrote so prolifically that he used, in all his writings, **50,000 different** words
- **Garry Kasparov** – the greatest chess player in history, played through, analysed, memorized and creatively commented on many **thousands** of the world's great chess games
- **Mozart** – in his brief lifetime this great creative musical genius wrote more than **600** pieces of music, including **40** complete symphonies

- **Pablo Picasso** – this creative giant of the 20th century produced more than **20,000** artistic works
- **Rembrandt** – involved in many activities including business, completed in addition to these activities more than **650** paintings and **2,000** drawings
- **William Shakespeare** – the creative genius generally considered to be the greatest English writer of all time wrote, in a period of less than 20 years, **154** sonnets and **37** masterpiece plays

The above list blows out of the water the common misconception that geniuses produce only a few precious ideas and then run out of (creative) steam. The opposite is obviously true: they generate vast numbers of ideas, and accelerate their productivity as their lives progress and their creative energy gathers more and more power from all that they have done before.

So did the great creative geniuses simply pour out perfect idea after perfect idea? Absolutely not! What they *did* do was to pour out *ideas*. Many of these were not particularly brilliant, but it was the ‘not brilliant’ that allowed the brilliant to emerge.

By constantly pouring out ideas, regardless of quality, the great creative geniuses were actually guaranteeing that they *did* produce more quality. They were allowing and facilitating the communication between their left brains and their right brains to produce a synergetic, ‘multiplying’ thought process that is typical of all those who know how to ‘use their heads’!

Our guide to genius, Leonardo, was a perfect example of this. In his

notebooks he would literally ‘doodle away’ with any random thoughts that came to mind, and out of those would leap the ‘genius’ ideas.

Thomas Edison, Leonardo’s great disciple, was identical in his approach. Edison considered creativity to be simply good, honest and delightful hard work/play. He described Creative Genius as ‘1 percent inspiration and 99 percent perspiration’. He practised what he preached too! Edison went through **9,000** experiments to perfect the light bulb, and over **50,000** to invent the storage-cell battery.

A further example of Edison’s total commitment to generating ideas, no matter what, can be found in the museum of his New Jersey laboratory. As you wander around, you see an astonishing array of hundreds of different phonograph horns of almost every imaginable material, shape, construction and dimension. They look like a collection of strange alien beings, with shapes ranging from round to square to multi-angular, to fat, to short, to tall, to thin, to straight, to curved and, in terms of aesthetics, from ugly to beautiful.

Most of these models Edison rejected: they stand as a eulogy to his commitment to experiment, to risk and to try and try again until he had found the ideal solution he was after.

His attitude towards ‘failure’ (one we should all copy) was ideal. For example, when he was asked by one of his assistants why he persisted in trying to discover a filament that would last longer in his light-bulb, even though he had failed thousands of times, Edison gently pointed out that he hadn’t failed *once*! What he had done was to have discovered thousands of things that didn’t work, on his way to finding, inevitably, the one thing that did.

gold mining

The creative idea generating process is very much like panning for gold. Gold flecks are just a few of many thousands of stones or grains of sand that lie in riverbeds. In the river of the mind it is exactly the same.

The stones or grains of sand represent all the ideas that are available. To mine for the gold (the great creative idea or new creative solution) you have to sift through *all* the grains (ideas) on the riverbed of your mind to find the real nuggets of value.

The great creative geniuses knew this, and therefore generated hundreds of ideas, sifting out from *them* the real nuggets. Dean Keith Simonton conducted a study of 2,036 creative scientists throughout history, and found what was then surprising – but which to you will now be understandable: the most respected scientists produced not only more great works, but also more *bad* ones than the other scientists.

In other words, the greats simply produced *more* and then selected, from everything, the best.

So now you know the secret of Creative Productivity: generate more ideas at higher speed, and you will enhance both the quantity and the power of your Creative Thinking.

It's time to practice this in a Creativity Workout.

creativity workout

1 Develop your Speed of Thinking

Most people think at a 'normal' rate, which is actually at the lower end of their range of possibility. Just by knowing this, and by gently focusing on your thinking speed, you will find that your creative speed naturally begins to increase.

2 Remember – Your Ability to Generate Ideas is Infinite

Remember the 'FUN' exercise in Chapter 3? Similarly, do you recall the infinite capacity you had for creating excuses for not getting down to those magazines or books you had been meaning to, or indeed any other task that you have been going to get around to but which similarly remains uncompleted?!

Look back on your life, and 'check off' all those things you have done that were, by definition, Creative. The more deeply you realize your infinite creative powers, the more your brain will naturally open up its own creative floodgates.

3 See Relationships Between Things More Quickly

On pages 100 and 101 you will find a number of key words dotted around the pages. The Fluency Game here is to pick at random any one of the words, and make associations between it and any one of the others.

For each pair, try to think of at least five similarities between them – the wilder the better! If you can find 10 similarities between any two, you are doing exceptionally well; 15, you are in the world's top 1 per cent; and

if you find over 20, you are already demonstrating Creative Genius in this area!

(There is more on your brain and its capacity for making associations in Chapter 8.)

4 Improve your Vocabulary

Increasing your vocabulary by only one word per day will give you over 360 new words each year! This will mean that you will have in your mind over 360 new centres for association to lie in wait for any floating possibilities of ideas, and to grab out and catch (associate with) them.

This will increase both the volume of ideas and the speed.

5 Art Building-block Speed Exercise

Refer back to the Creativity Workout in Chapter 4, and try doing the art building-block exercise on page 66 again, this time adding the urgency of speed. Time yourself as you do this exercise, and once a week or once a month try a similar exercise again, making sure that with each successive exercise the time it takes you to get to a 'form' is less and less. This exercise is extremely useful for getting your Creative Mental Muscles in tip-top shape.

6 Individual Brainstorming

When you are brainstorming anything, just let the ideas flow. Generate as many as you can, as quickly as you can, holding back any judgement on whether they are good or bad, practical or impractical until you have finished.

Constantly 'editing' and self-criticizing as you generate ideas is a very common habit, and is a perfect way to crush your creativity!

7 Group Brainstorming

The procedure here is identical to the Individual Brainstorming above, except that you need to make very sure that everybody else is comfortable enough to be prepared to voice any ideas that come to them, no matter how 'off the wall'.

If anybody in the group starts to criticize any ideas, you can immediately become a creative leader by saying: 'Yes that's a great criticism, but let's hold that off to the next stage. Let's keep generating!'

8 Slow Down to Speed Up!

Think again about where you are when you have those bursts of creative ideas, those sudden cascades of wonderful memories, and those sudden revelations of solutions to problems.

Relaxed and, often, alone.

To increase your Creative Fluency, make sure that you give yourself regular opportunities to get yourself into these 'slow' situations, in which as your *body* rests, your *brain* speeds up and does all the work for you!

9 Keep Blank-page Mind-Map® Notebooks

Keep these notebooks in places where you are likely to have bursts of ideas, such as by your bedside, on your desk, in the car, etc. Or make sure you carry a notebook around with you at all times. Whenever you

have your 'Creative Bursts' quickly jot them down in Mind-Map® form (see Chapter 3). You will find that simply having the pads available will encourage your brain to generate more creative thoughts, much as having snacks available encourages you to nibble!

10 Give Yourself Goals

In traditional brainstorming sessions, the average individual thinks of 7–10 creative ideas; over two days the average group thinks of 120 ideas.

If you give yourself as an individual the goal of 20–40 ideas, and yourselves as a group 200–400 ideas, you will force your brain to come up with more ideas than it normally would. The more ideas you generate, the more probable (as you now know), that you will find the gold!

river

son

orange

bird

sword

nail

jar

spaceship

pen

mouth

light-bulb

moon

leaf

bus

frog

beetle

stone

sun

watch

breast

guitar

creative flexibility and originality



chapter seven

So far you have learnt that your brain is a super-synergetic instrument designed to be Creative, and that by combining its two sides you multiply your Creative Power immensely, especially in the area of making your thoughts visible through Mind-Maps®.

To add to this you now know that you are naturally both artistically and musically creative, and that your potential for Creative Productivity is absolute and infinite.

In this chapter you will learn to get out of the 'one-track' rut in which most people find themselves stuck. I will show you techniques for viewing things from many different perspectives. In addition you will learn how to take the incredible uniqueness that you already possess and make yourself even more unique – more original.

You will learn, in summary, the unique Creative Principles of Flexibility and Originality.

expanding your flexibility and originality

Flexibility in Creative Thinking is much like physical flexibility. It means that your brain is able to move fluidly and effortlessly in all directions and at all angles.

Creative originality is how different, how special, how unique, how unusual and how far from the normal your thinking really is.

When you consider 'originality', it is worth thinking about the word 'eccentric'. What does 'eccentric' actually mean? '*Ec*', away from, '*centric*', the centre. So an eccentric is simply a person who is 'far from the centre', i.e., not normal. In Creative Thinking, being 'not normal' is the whole idea!

How do you achieve this?

There are three main ways.

1 Seeing Things From Different Viewpoints

A normal person sees things often from only one viewpoint – usually his or her own. The Creative Genius can see things from an infinite number of perspectives, angles and viewpoints. This ability to see things from different points of view is a necessary quality of genius in areas as vastly and widely different as poetry, acting, education and leadership. Some wonderful examples will illustrate the point:

Case History – Ted Hughes

The English Poet Laureate was one of the great Poets of Nature. Rather than writing his poetry about nature, animals and all living things from his own point of view, Hughes would write it from *their* point of view. In his poems he entered the minds of foxes, bulls, jaguars, and myriad birds and fish.

This is how Hughes got into the mind of a salmon at the peak of its strength and vitality:

*On the surge-ride of energy, weightless,
Body simply the armature of energy
In that earliest sea-freedom, the savage amazement of life,
The salt mouthful of actual existence
With strength like light.*

Case History – Jodie Foster

Jodie Foster has been an actress all her life – a profession in which putting yourself in the shoes of other people is the first and most important requirement. She starred in her first TV commercial when she was just three years old, and was nominated for her first Oscar for her role in *Taxi Driver* at the age of 14. Over the last 30 years she has acted in nearly 50 roles, most memorably as the victim in *The Accused* and as Special Agent Starling in *The Silence of the Lambs*.

Foster can not only think herself into myriad different characters. In the 1990s she changed her point of view by going behind the movie camera to both direct and produce her own films, to great critical acclaim. She also looks at life from the perspectives of a Yale graduate, a mother, and an astute business person.

Case History – Maria Montessori

In the late 1800s and early 1900s, an amazing young woman in Italy, Maria Montessori, had a unique revelation. Maria had already distinguished herself by becoming the first ever woman in Italy to receive a degree in medicine, which she was awarded just over 100 years ago.

Maria was particularly interested in children, and it was while visiting kindergarten and primary schools that she realized something that subsequently, because of her, changed the way the world thinks about the education of the very young.

Her realization was that *everything* in schools was built and taught from the point of view of *adults*: the chairs and desks were far too large, rough and heavy; the order of things was rigid – the rules of behaviour were based on the army! Colour was either absent or blandly ‘official’; nature was absent; silence was the rule; asking questions was forbidden; reading, writing and arithmetic were the only subjects taught; and *Creativity was totally absent!*

Maria put herself into the mind of the four or five-year-old child, and created a new universe for them.

In Montessori schools, the chairs, desks and tables are designed for little bodies; classrooms are filled with colours, beautiful things to look at, different textures and varying fragrances; nature becomes a part of the classroom in the form of plants, aquariums and pets; movement is encouraged; questions rewarded; and every opportunity given for the questing young creative mind to explore, express and develop itself.

By one person looking at things from a different point of view, the world's education systems began to be transformed.

Case History – Alexander the Great

Alexander the Great, whose never-ending Creativity in military invention and battle strategy earned him the title of the greatest military commander and leader of all time, was brilliant at seeing things from other points of view – and not just from that of other people, but animals too.

Alexander was introduced to the giant horse Bucephalus. No one had ever been able to mount and ride the animal before, and everyone was wondering whether the great Alexander might finally have met his match.

He hadn't!

Unlike the others who simply tried to use brute force against this giant stallion, Alexander tried to get into its mind. He realized that Bucephalus was afraid of one thing – his own shadow. Alexander therefore held the horse and turned him to face to the sun. Once his

shadow had vanished and Bucephalus became calmer, Alexander could mount the horse and tame it.

Case History – Martin Luther King

The great Black Civil Rights leader in the 1950s and 1960s campaigned tirelessly for social justice and the end of racial discrimination and segregation between blacks and whites in America. His charismatic leadership and rousing speeches inspired tens of thousands of people, both in America and elsewhere across the world, to participate in non-violent direct actions to stir the consciences of those in government.

King was adept at seeing things from the other person's point of view: from that of poor jobless blacks trying to seek work on the same terms as their white neighbours; from that of poor white labourers worried about supporting their families; and from that of Presidents and politicians trying to please different sections of the voters. It was because he could see others' views and problems that he was able to achieve so much.

2 Making Creative Combinations

In addition to being able to see things from different viewpoints, the great creators were able to link things in ways that no one had ever thought of before. Again, a few examples will make this clear:

Case History – Isaac Newton

Everyone knows that Isaac Newton was inspired to create his Laws of Universal Gravitation when an apple dropped on his head. This common myth is nearly accurate, but not quite. The real story is actually far more interesting.

As Newton himself reported, he conceived his theory when he saw an apple falling (*not* onto his head!) *at the same time* as he saw the moon hanging in the sky.

The simple, childlike questions that arose in his head were: ‘Why did the apple fall?’ and, more importantly, ‘Why *doesn't* the moon fall?’ ‘Does the same law that makes the apple fall, apply to the moon?’

It was investigating the combination of the fates of these very different ‘balls’ that sparked Newton’s Creative Thinking processes, and led to his development of the theory that is still the core of most modern engineering and science.

Case History – Gregor Mendel

The 19th-century Austrian botanist and monk, Gregor Mendel, spent many hours in his monastery's garden daydreaming and looking at the beautiful and different colours of the sweet-pea flowers, when an extraordinary *connection* became apparent to him: he noticed that the appearance of the different colours appeared to be linked and related to simple mathematical progression.

From this simple, brilliant and *connecting* observation, Mendel was able to work out the Laws of Inherited Characteristics (why and with what probability you have blue or brown eyes, etc.) and which eventually gave rise to the multibillion-dollar industry that is now genetic engineering.

Case History – Leonardo da Vinci

As always, our creative guide Leonardo da Vinci is here! Finding novel combinations was one of Leonardo's great creative strengths. One particularly interesting one was his noticing that as leaves fell to the ground in the autumn they formed banded layers, the older, more rotted leaves forming darker layers; the fresher, more recently fallen ones lighter layers.

Leonardo *connected* this observation with the layers of different colours in cliffs and bare mountainsides. A basic concept behind the science of geology was recognized!

3 Reversing Things

Another interesting way of finding novel combinations is the creative art of *reversal*. In reversal, you simply take whatever exists, and consider the opposite. You will often find that this produces extraordinarily useful and unique results.

Case History – Mohammed Ali

Mohammed Ali is considered by many to be the greatest sportsman of the past 100 years. Ali used the Creative Thinking technique of reversal to his advantage.

Everybody said that heavy men could not dance – he danced!

Everybody said you should always hold your hands up when you box – Ali held them down!

Everybody said that big men could not be fast – Ali made himself the fastest boxer ever!

It was Ali's ability to reverse traditional thinking that enabled him to take his sport to totally new creative levels.

Another famous athlete did something similar.

Case History – Dick Fosbury

In the 1960s, a young American high-jumper, Dick Fosbury, had been trained, like everybody else, to 'dive' over the bar face and chest down. Fosbury asked himself the *reverse* question: 'What

would happen if I went over backwards?’

The answer was that he could jump higher! By a simple act of reverse thinking, Fosbury had not only discovered an entirely new jumping technique; he had transformed his sport forever, and was immortalized by the name of his revolutionary new technique: the ‘Fosbury Flop’.

Case History – Michelangelo

Michelangelo, probably the greatest sculptor ever, was also a practitioner of Reverse Thinking. While most sculptors and teachers of sculpting thought (and often still think) that the purpose of the sculptor was to impose a shape on a formless lump of marble, Michelangelo felt the opposite. He considered that the perfect form was already *in the stone*. His task was to chip away the unnecessary marble and to let that already-existing shape free from its stony prison!

By thinking in this way, Michelangelo made his task conceptually much easier: instead of having to impose his own will on the recalcitrant stone, he was simply the image’s servant, chipping away to reveal the beauty that lay beneath the surface.

As you now will be increasingly aware, by learning how to see things from different viewpoints, by making new connections, as well as by reversing concepts, you can create astonishing new ideas.

By doing this it is obvious that you as a person become more different, more unusual, more far from normal, more original and unique. You become a person to whom others will refer as special, creative and, even, a genius!

creativity workout

1 Listen!

When people are explaining things to you, or trying to present their side of an argument or interpretation of a problem, not only listen to what they say, but *listen to 'who they are'*. Try to see totally from their point of view what it is that they are trying to explain.

When you achieve this, you will increasingly become known as a 'good listener', an interested and interesting person yourself, a trustworthy friend, and someone who makes others comfortable. At the same time, you will be improving both your memory of what is said, and your creative power to see things from multiple perspectives.

2 Put Yourself in the Other Person's Shoes

This doesn't just mean empathizing with other people's views – try and see things from other creatures' points of view too. Whenever you see an animal, do as Ted Hughes did, and try to see the world (and yourself!) from its point of view. Use your imagination to think yourself into the place of things – for example, what is the point of view of the spoon with which you eat your cereal? What is the point of view of the ball you are about to throw? What is the point of view of the hat you are putting on? What is the point of

view of the car you are driving? What is the point of view of the insect you are observing? What is the point of view of the star you are seeing?

3 Reverse your Life!

Look at your life and all its aspects and activities, and consider, one by one, reversing everything! This exercise will give you a fresh look at who you are and what you do, and will allow you to make changes where appropriate, and to leave things as they are when you realize they are satisfying and rewarding to you. Consider your clothes, friends, foods, locations, cultural activities and athletic pursuits. If you go to the gym in the evening, try going before breakfast. Swap rooms around, so that you sleep in your living room and live in your bedroom.

You'll probably decide to leave much as it is; similarly you'll probably decide that a number of things, when reversed, could make your life much more happy, creative and rich.

4 Try New Combinations of Things

Rearrange things in your home and daily life. Try out new types of food; consider decorating a room in colours and fabrics you would not normally think of using; rearrange the furniture; take up a new hobby and expand your social circle.

5 Learn to Tell Witty Jokes

If you think about it, some of the best jokes are where two unconnected things are linked together in a new and hilarious way, or where the

standard concepts are reversed in a manner that has you rolling on the floor. Humour is an extremely creative activity, so the more you can be with people who are regularly joking and laughing, the better it will be for your own Creative Thinking Power.

6 Practice Making Connections

In your daily life, randomly pick two very different objects and try to make a witty or humorous connection between them.

How, for example, would you link the concepts of boxing and insects? Mohammed Ali managed it, with the phrase '*Float like a butterfly, sting like a bee!*'

7 Link the Different Activities in your Life

Thomas Edison is a marvellous example of this. Edison's scientific and experimental laboratory was a giant barn-like building with many different tables and benches, each one containing a different project on which he was working.

Edison designed his workshop in this way to allow each one of his ongoing projects to connect, in his mind, with all the others. He considered that anything he did in one experiment might have some unexpected connection with the others. He found that this was tremendously useful in helping him create new ideas.

Using this approach will help you realize that your life is much more integrated than you may have thought, and it will also give you the opportunity to make new creative additions to it.

8 Play Novel Combination Games

At parties, or on festive occasions, try asking all the participants to find the most unusual connections between any given objects in a situation.

9 Use the Techniques Learnt Here to Create Some More Original Ideas!

Skim through *The Power of Creative Intelligence* and make new associations between each and every chapter. Then try reversing your thoughts!

your brain: the ultimate 'association machine' –

expansive and radiant thinking



chapter eight

In this chapter you are going to learn the fundamental secret of all Creative Thinking, and are going to play Creative Thinking Games that will give you extraordinary insights into the workings of your Creative Brain, and of its potential and power.

By now you have probably realized that there is one key to all the ideas that have been discussed in the previous chapters – ASSOCIATION.

Fluency, Flexibility, Originality and Reversal Techniques are all based on this magical word. It is the secret that all great Creative Geniuses used to accomplish their feats.

Association holds the secret of the way your brain fundamentally thinks. It is the secret that, once you know it and know how to use it, will reveal limitless creative treasure-troves for you to explore for the rest of your life.

This chapter is therefore devoted to an expanded Creativity Workout, with exercises that will entertain, challenge, inform and amaze you.

creativity workout

1 Exercise your Creative Power of Fluency

Speed-read through each of the Creativity Workouts in the previous seven chapters and put a little star by any exercise you can identify which contains Association as its main element.

2 Association – Self-exploration

In this Association game, imagine that you are a super-computer. You will be asked to access a piece of information, and to examine a number of things about it and yourself. When you have looked at the ‘data’ and ‘accessed’ it, let it drift around in your head for a little while, exploring the Associations that creatively spring to mind.

When you have been given the piece of data (it is a name), you need to ask yourself the following questions:

- Was I able to recognize the owner of the name (i.e. to access the data) successfully?
- How long did it take me to ‘get’ the information?
- Was the piece of data I retrieved represented in my brain by words or an image?
- Where was the image I accessed?

- Was there any colour in it?
- If there was colour, where did it come from?
- With what did I see it?
- What were the Associations that radiated from it?

When you are ready, turn to page 127 and you'll find a name in big bold letters. As soon as you have registered it, close the book, and let the Association drift. Then answer the questions you have just read.

Most people answer 'Yes' to the first question.

To the second question, they often snap their fingers, meaning instantaneously.

Just think for a minute about what this finger-snap *really* means. They are saying that from a trillion-bit database (their phenomenal memories of their life to date) they have randomly accessed an entire database 'just like that'! If you can explain how the human brain does this amazingly complex process of re-creating images, you'll get a Nobel Prize 'just like that'!

If you can explain where the person named had been hiding all the time until you decided to hook (link) him or her out, you'll get another Nobel Prize! Moreover, if you can explain where the person actually is in your head, where the associated colour comes from, how you can see the person's image, and with what (it is obviously not your eyes), you'll get another and another and another Nobel Prize!

When you are chatting over tea or coffee, or with friends in the pub, your and your friends' brains are doing a series of associative tasks at such lightning speed and with such incredible efficiency and smoothness,

you don't even realize that what you are doing is something that no super-computer can even begin to do, and which none of the world's greatest scientists can yet explain.

Your brain is an associative miracle!

As you will recognize, the exercise you have just done is similar to the 'FUN' exercise you did in Chapter 3, and is another example of how your brain creates vast internal Mind-Maps® that are infinite in their potential to expand.

3 Mind-Map®

From now on, Mind-Map® *whenever* you have a thinking task. From the previous exercise you will realize that linear note-taking is not only a prison, it is a bit like a series of Samurai sword-cuts that keep slicing your thoughts off at the knees. Mind-Maps® allow you to explore the infinite associative universes that your brain can create. Use them!

4 The Connection Principle

One of the most important cornerstones in Leonardo da Vinci's formula for developing a great creative mind was his Principle of Connection. This basically stated that 'everything connects to everything else'. As Leonardo put it: 'Everything comes from everything, and everything is made out of everything, and everything returns into everything.'

Do you agree?

If you are one of the very small minority who do not, all you have to do to disprove Leonardo is to find any two things which in some way do *not* connect.

Leonardo used his Principle of Connection to come up with extraordinary insights into the nature of the world around us. These insights became the foundations for much of modern science.

Here are a couple of Leonardo's Connections. First:

'Observe how the movements of the surface of the water resemble that of hair, which has two movements: one of which stems from the weight of the hair; the other from the waves and the curls. In the same way the water has its turbulent curls, a part of which follows the force of the main current, and another obeys the movement of the incidents of reflection.'

And:

'The stone where it strikes the surface of the water, causes circles around it which spread out until they are lost; in the same manner the air, struck by a voice or a noise, also has a circular motion.'

Follow Leonardo's example. Try to find connections between *anything* and *anything*.

5 The Non-uses for a Paperclip Game

Give yourself five minutes for this next Creativity Game.

For five minutes, writing as fast as you can, brainstorm all those things for which a paperclip, cannot, in any way, be used.

As you do this exercise, I want you to utilize every possible tool you have learnt in *The Power of Creative Intelligence*. Make sure that you bring everything from your mighty brain to the task, especially what you have learnt about your infinite capacity, and the information on Fluency, Flexibility, Originality and Association.

Whenever you are ready, begin the exercise. When you have completed it, tot up the number of ideas you have had. Circle those ideas which you think are your most creative and then read on.

In traditional Creative Thinking games any number of ideas generated over 10 is considered good. Over 20 is regarded as superb.

In the game you have just completed, however, there is a strange outcome: both a high score and a lower score can be considered excellent!

To generate a lot of ideas is obviously excellent, in that it proves that your Fluency, Flexibility, Originality and Associative brain skills are working well.

However some people find that these very skills cause them an internal debate which actually slows down their productivity. For example, once when I tried this game out, one person thought that a paperclip could not, in any way, be used for drinking liquids. She then

argued with herself that you could dip the paperclip into a thick soup, and although the method would be slow, you could still drink using a paperclip.

Now return to your ideas for the non-use of your paperclip, especially the best ones, and start the debate with yourself by again asking the question: 'Could I, in *some* way, use a paperclip in this instance?' Try out your best ideas on your friends.

6 Cause and Effect

Cause and effect, the foundation of modern science, once again depend upon the brain's astounding capacity to make Associations.

A cause is one thing that *connects* logically to another thing. You can exercise the power of your Creative Intelligence by creating imaginary and multiple 'causes' for 'effects'. For example, if you see a person who is angry, think, for that particular person in that particular Association, of at least 10 causes why he or she might be angry.

Similarly if you see a flock of birds suddenly sweeping off at a sharp angle in the sky, think of at least five reasons why they might have done so. And so on!

Such an Imagination Game will fill your life with wonderful Creative moments, and will add to your power of imagination, creative writing and creative storytelling. Indeed, some of the best crime and detective writers begin with the premise that if so-and-so occurred, what would happen if it caused such-and-such?

7 Play Association Games

In this particular Association Game, note down a profession and a major item associated with that profession. For example: golf – golf club; writer – pen; fisherman – net; dustman – dustbin; computer programmer – computer; footballer – football; policeman or woman – police car; television presenter – television; butcher – butcher's knife; etc.

Next scramble the occupations and the objects associated with them, and make imaginative scenarios that creatively expand on these new associations.

This is a marvellous game to play with friends. You will get some surprisingly witty results, and lots of laughs! You can make up an infinite number of games based on the same principle.

8 Use Associations to Improve your Memory

What are the two main cornerstones of your memory? *Association* and *imagination*. I have recently been working in this area of the brain and intelligence, and have discovered that Creativity and Memory are not, as is often assumed, opposites. They are *identical*. In Creativity you make Associations for the purpose of *creating* new ideas. In Memory you make Associations for the purpose of *re-creating* ideas!

So from now on, use everything you have learnt in *The Power of Creative Intelligence* to increase the power of your re-creative Memory! For example, when you park your car, associate it with something in the environment (not the car next to it! The thing you associate it with has to be permanent!) Similarly, when you put down your keys, wallet,

passport, briefcase, coat or umbrella, do the same thing: Associate that important object in your life with its environment, and you will remember (re-create) the environment in which you placed it, and where it is in that environment.

People who effortlessly remember names of strangers at parties often use this technique – associating the person and the name with something that they can remember/re-create later.

9 Experiment with Associations in your Daily Life

As you did in the previous chapter's Creativity Workout, experiment with new combinations in your diet, in your clothing, with your friends, and on your holidays, etc. This time, be especially aware that as you do so you are experimenting with and increasing the power of that marvellous and infinitely capable Association Machine – your Brain.

10 'The Universe and Me' Game

In this exercise you have to put yourself 'at the centre of the Associative universe'. Each day, pick one random concept or idea, and generate five or more ways/ideas in which this random concept relates to you. Some good ones to get you started include:

Chemistry and me
The sun and me
The moon and me
A video-camera and me
A bird and me
A spaceship and me
Love and me
A paperclip and me!
Planet earth and me
Colour and me

11 You and Animals

Another fascinating Association Game is to compare yourself with as many different species as you can from the following classifications: mammals; birds; fish; reptiles; insects. Note the similarities and differences in each case. Decide which animals most resemble you or your ideals.

This is a great game to play with friends and colleagues. It is also a wonderful way of 'breaking the ice' when meeting new people.

BILL CLINTON

you and shakespeare – poets both!



chapter nine

This chapter shows you how you can use everything you have learnt in *The Power of Creative Intelligence* to release the tremendous power of Poetic Creativity that is within you. You will discover that as well as being a natural-born Artist and Musician, you are also a natural-born Poet.

You will learn a technique developed by myself and the late Poet Laureate, Ted Hughes, for generating as many poems as you wish!

First, let me explain how I became convinced of the creative power of poetry. (It will help you to know that at this time my main interest was nature and the outdoors.)

When I was a young teenager, my friends and I despised poetry, considering it wimpish, weak and for the feeble-minded – nothing to do with life, excellence, strength or power.

This was made worse by our English teacher at that particular time – a pale, often ill, small, untidy spinster who used to call us ‘children’ (*us?* children?! – we were 15 and we knew everything!) She would read poetry in a very dull and boring monotone, telling us that we were all Heathens, insensitive, unappreciative and boorish. English classes were a disruptive disaster, and we learnt less than nothing.

One day she came into the classroom clutching a poetry book. To general groans of boredom and despair, she announced that she was going to read her favourite poem.

She announced: ‘I’m going to read you a poem about a bird.’

We all cringed and groaned even more loudly than after her first announcement.

‘It’s a poem by Alfred Lord Tennyson.’ (More groans!)

Then she began, and in the next minute my life was transformed. The poem she read contradicted everything me and my friends had thought about poetry, and brilliantly used every Creative technique that you have learned. The poem was about that paragon of birds, the eagle.

The Eagle

*He clasped the crag with crooked hands;
Close to the sun in lonely lands,
Ringed with the azure world, he stands.*

*The wrinkled sea beneath him crawls;
He watches from his mountain walls,
And like a thunderbolt he falls.*

I sat stunned. In that one minute I had been transformed from a poetry-hater to someone who wanted to be able to convey, with such power and magnificence, the images, thoughts and emotions that were in my own head and fighting to get out.

Not even consciously knowing at that age that copying was a necessary part of Creativity, I decided to write my first poem in the style of my new hero, Tennyson.

An opportunity presented itself to me a few days later, when I was walking along a pier dotted with fishermen. As I walked by one of the anglers, he reeled in a beautiful gleaming silver-and-rainbow-coloured fish, which he immediately grabbed, held down on the grated iron floor of the pier, and proceeded to pound on the head with the fishing line lead weight until its frantic strugglings were nearly stilled.

As I was standing so close, and looking so intently at this life and

death scene, it seemed as if the fish was looking me straight in the eye as it died. I felt guilty for not having tried to save it, and the seeds of my first poem were sown.

I went home, a doubly-changed teenager, and wrote my first ever poem, *The Catch*, which launched me on my Creative Writing career.

The Catch

It stares through me with glazing eyes;

The blood, congealing on them, dries;

As gasping one last breath, it dies.

The fish that once looked so divine

Lies smashed and dead, with broken spine.

I leave. The angler sorts his line.

creativity and poetry

As will be coming clear, poetry simply involves applying the principles of Fluency, Flexibility, Originality and Association to your relationships with words. The technique was used, in conjunction with Mind-Maps®, by Ted Hughes.

Hughes developed a wonderful method for developing creative and metaphorical thinking in which he used memory systems and Mind-Maps®. First he would teach his students simple memory systems to

prove to them that by using the power of Association and Imagination, their memories could develop to a level of perfect performance.

Hughes used to emphasize that the more bizarre (removed from the norm!) their images were, the better his students' memories would be.

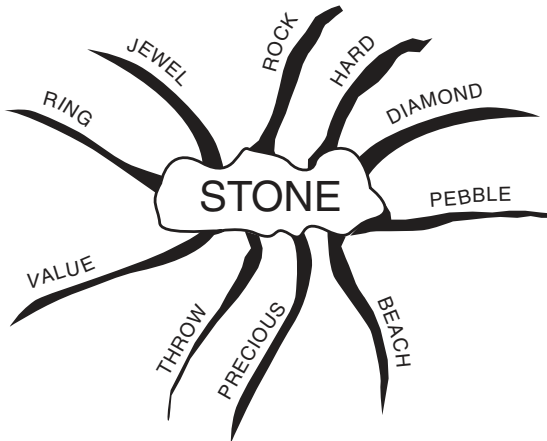
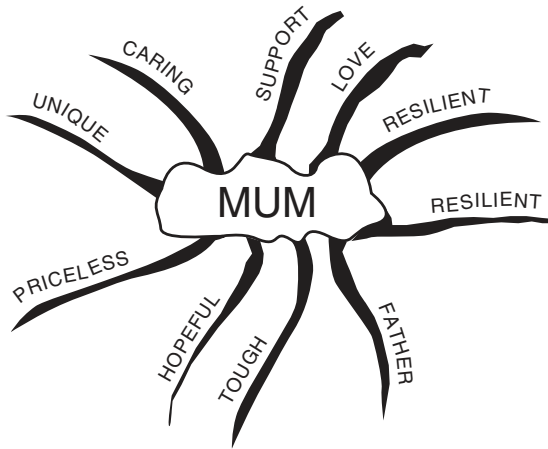
Having broken the traditional log-jam in their imaginations, and encouraged those imaginations to run wild, he took them through an exercise very similar to that which you have done, linking unconnected words to each other (see page 96).

He would give his students a pair of apparently completely disconnected objects (such as 'mother' and 'stone'), and would ask them to do a Mind-Map® exercise, identical to the 'FUN' game you did in Chapter 3.

When the students had thought of 10 words around each object, Hughes would then instruct them to take one word from one concept and find associations between that and the ten words from the other one. They then moved to the second word from the first concept and found associations with the ten words from the other, and so on until they had associated all ten with all ten. To everyone's amazement many of the associations were extremely unusual, highly imaginative, very provocative and often quite moving.

The students' next task was to select the best ideas from all their thoughts, and from them to construct a creative and original statement, and ideally a poem.

The 'mother-stone' 'opposite' was one of his favourites, and I give as an example my own two Mind-Maps® (overleaf) and resulting mini poem from this exercise.



Thank You

Gems embrace her throat.

She the Jewel.

In Her Crown,

the Diamond of my Mind.

Another one of Ted's favourites was to juxtapose 'one' a person, and 'one', an animal. The exercise was the same: radiate 10 thoughts on the first word, 10 thoughts on the second and then find the most enticing associations.

For your own amusement, randomly pick pairs of 'opposites' from a dictionary, and find at least two associations between each as you go along – or do the poetry writing Mind-Map® exercise on each, and write your own creative pieces.

With the techniques of the great creative geniuses on your side, with the technique of Mind-Mapping® to help you explore your poetic thought, and Ted Hughes' method as a guide, you are now ready to start your penultimate Creativity Workout.

creativity workout

1 Play the Poetry Association Game

Take the poetry generation ideas on the previous page, select a couple of your favourites, and write a little poem, much as I did using the Hughes technique on page 133.

2 Poetry and Creative Thinking Techniques

Go back to Tennyson's poem *The Eagle* on page 131, and examine closely what Creative Thinking techniques are used throughout the poem. Find anything that appeals to you in the poem, and use that approach in your own poetry writing.

3 Look for Poetic Moments in your Life

Be on the look out for autumn leaves blowing across the grass; fleeting expressions passing across peoples' faces; shapes or landscapes in clouds; sunbeams passing through those clouds; and animals in their varying activities. Spend a little more time looking at and musing upon these events, and consider writing poetic descriptions of them.

4 Form Poetic Rituals

Many of the great creative writers (including Ted Hughes) used to have a candle alight beside them whenever they were writing. The candle flame is a wonderful 'creative meditation' device, which encourages your brain to look at a beautiful, ever changing object

and to daydream. From your daydreams will come many wonderful poetry insights.

5 Take Part in Poetry Activities

Go into book shops and libraries, and browse through books of poetry, selecting those that especially appeal to your own Creative Imagination. Join poetry reading and poetry appreciation clubs, or form one yourself! Check the world-wide web – poetry is proliferating there and you can both learn and contribute.

Make poetry and poetic imaginative thinking part of your life!

6 Keep a Poetic Notebook

Buy a beautiful, visually appealing notebook and jot down your Poetic and Creative ideas in it. Its very presence will encourage you to dip into those giant poetic wells of Creative Imagination that have been just waiting for you to draw from them.

7 Create Short Poems

To get you started, try writing short poems, such as Japanese Haiku. A Haiku is always three lines long, and traditionally consists of 17 syllables. The idea of a Haiku is to take any normal object, concept or emotion, and to look at it simply and deeply from a new perspective.

For example, taking the theme of ‘summer’:

Summer: Mercury: sun-hot;

Summer: Mars: dry ice;

Summer: Earth: paradise.

Pick your own favourite subjects or themes, and play with this wonderful poetic form. Have fun and be social with your poetry. It is important to realize that poetry is not always 'serious'. It can be filled with fun and laughter and love and playfulness.

Take the opportunity, when family members or friends have birthdays, anniversaries or celebrations, to write them little poetic messages or rhymes, much as you find in the cards in card shops. For stimulation, browse through some of the standard ones, and try to improve on them!

8 Develop the Use of your Senses

Once again, our wonderful guide Leonardo, who was also a writer of beautiful poetry and poetic prose, comes to our aid. In addition to his Connection principle, he had another one – that of Sensation. Leonardo suggested that when you are thinking creatively or writing creatively you should have developed your senses so that you can use *all* of them in your creative expression.

Many budding poets and writers fall into the trap of using only one sense – such as 'sight'. When you write your creative masterpieces involve all your senses.

9 Remember – You are a Natural-born Poet

As with art and music, continually reinforce to yourself the fact that *you* are a natural-born poet. Your brain has been writing and thinking poetry and poetic and beautiful thoughts for your entire life.

Now is the chance to let it be free.

Allow it to write POETRY!

only kidding



chapter ten

This final chapter will look at that greatest of creative individuals – the child!

You should come to realize that as you mature, you should be getting more youthful; that the older you get the younger you should become! Here you will be introduced to why it is so important for you to re-create the child you were; we will explore a dynamically new approach to Creative Thinking, and will take part in your final Creativity Workout, which, in this chapter, will be a Playground!

the child

Einstein, as we have seen, was like a grown-up child. He was always filled with wonder at the universe he was exploring, and was always

asking simple, obvious and profound questions about the nature of space, time, the universe and God.

Isaac Newton, another of the great giants in the history of science, was considered by others to be the epitome of the serious, awe-inspiringly logical and rational, forbidding scientist.

He considered himself in a very different light. He said that he thought of himself simply as a little boy wandering along a beach. Occasionally and delightfully he would find a beautiful new shell or spot a gleaming multi-coloured stone that enraptured him. The beach was washed by a giant ocean, by the side of which this little boy played.

To Newton, his profound theories and insights were simply those beautiful shells and shining gems; the giant ocean was the Ocean of Truth, which he had hardly begun to explore.

away from the child

A disturbing experiment, recently carried out in Utah, America, investigated the amount of Creative potential used by people at different ages. To research the 'Development' of Creativity throughout life, kindergarten children, junior school children, high school and university students, and adults were surveyed to determine the amount of Creative potential used in tests. The results were traumatic!

age group	percentage of creativity used
Kindergarten children	95–98%
Junior school children	50–70%
High school/university students	30–50%
Mature adults	less than 20%

As a near-graduate of *The Power of Creative Intelligence* you will know the reason why: as the children's lives had progressed, all the things that we have spoken about in this book were gradually 'edited out' of their lives, leaving only the husks and discarded shells of Creativity remaining.

in the box; out of the box;
back in the box!

The way in which we have trained ourselves has, in the modern expression, kept all of our thinking 'in the box'.

Much of modern education and business training is now increasingly being devoted to getting us 'out of the box'. On one level that is what *The Power of Creative Intelligence* has been helping you to do.

But let's use one of our own Creative Thinking tools, and look at this (as we know we must do!) from another perspective.

At festive seasons and anniversary times, there is a common complaint made by parents about the reaction of their very young children to the fabulous toys they have been given. The complaint goes something like this:

'We spent over £100 on this fantastic toy, with all kinds of new-fangled gizmos and gadgets, and our little boy and little girl spent 15 minutes playing with it and then discarded it. And now they are playing with the box in which the present came!'

Why is this so often the case? Think about it. The children's amazingly creative brains have worked out their new toy in virtually no time at all, realized that it does a few basic, generally repetitive things, enjoyed it, and moved on. To what? To something *far* more interesting – *the box*.

just *think* what that box can be to a child. it can be:

- a time-travelling machine that will take them back to the times of the dinosaurs
- a spaceship that will take them to the end of the universe
- a cave
- a home
- a car
- a boat
- a secret hideaway

And you yourselves will be able to supply, using your own childlike and creative imagination, at least another 20 imaginative uses that a child might have for a box. Try jotting some down now.

So we will now reverse the modern trend, and instead of getting 'out of the box' we are all now going back 'into the box', where the playground for our Creative Imagination is infinite – *as long as we, like children, know how to use it.*

In traditional Creative Thinking circles 'in the box' is bad, and 'out of the box' is good. From the child's point of view, when you are 'in the box', as long as you have your imagination with you, you are already *out* of it. So in the new perspective of *The Power of Creative Intelligence*, you can see that whether you are in or out of the box, *you* win!

From now on, therefore, you will be able to follow *two* guides through your life to help you nurture, grow and develop the power of your Creative Intelligence: Leonardo da Vinci and the child.

As promised, *this* Workout is child's play!

creativity playground

1 Stare at Things

Like a child, *stare* at things. When children stare, their eyes are absorbing every detail, which they store up for later use in their fertile and creative imaginations.

2 Listen to Stories

Like a child, search out stories and storytellers, and listen to them with rapt attention. As you listen with eyes and mind open like a child, your own fantasy world is being filled with riches for its further use.

3 Make up Stories

By giving your Creative Imagination totally free reign, you'll be able to make up incredible fairy stories and fantasies, *just as a child does*.

4 Play with your Food

We are constantly telling children not to play with their food. Why do they play with it? Because it's such fantastic multi-sensory fun! When we say: 'Don't play with it' we are really saying 'Don't enjoy it! Don't become a chef!'

Cooking is becoming one of the world's most popular and fastest growing hobbies. Happily more children are following in the children's foot and hand-steps. Follow them!

5 Play with Children

Rather than giving children adult games that they can play with you, when you next play with children (and it should be soon and often!) let *them* be the total leaders of the game. You will find your Creative Intelligence infinitely stretched, as well as your body!

6 Learn to Do New Things

The child's life is creatively filled with constant, second-by-second and day-by-day learning and experimentation. Re-create this attitude in yourself, and explore and learn more. As you redevelop this habit throughout your life, every aspect of it will become more creative and more fulfilled.

7 Allow Yourself Simple Treats

One of the greatest enjoyments for children is special small treats, like an ice-cream cone with their three favourite flavours on it, or an especially warm, crusty and fresh-from-the-oven loaf of bread. When you have been a 'good kid', reward yourself in these little and incredibly pleasurable and pleasuring ways.

8 Use the 'Kids' Kit'

The 'kit' that children use to climb up the giant mountains of knowledge is based on the grappling hooks of 'What?' questions! Children are always asking 'why?' 'who?' 'where?' 'what?' 'when?' The answers, their growing little brains intuitively know, provide the links and associations that build up the huge maps of knowledge that they need as they go through life. Ask as many questions (and with as much persistence!) as children.

9 Ask 'Why?' or 'How?' Five Times at Least!

As a creative mind-expanding exercise, get into the habit of asking 'why?' and 'how?' five times. After the first question there will be an answer. Ask the question again, with reference to that answer. This will force your imagination and knowledge banks to expand and delve deeper. Repeat this process five times, and you will usually find that you have reached the boundaries of current knowledge and are progressing into the realms of required imagination and Creative Thinking and Problem Solving.

10 You are a Child at Heart!

Realize that no matter what people have said (or even what you may have thought), you are a child at heart, and always have been:

Who are the best learners on the planet? Children!

Who are the best question-askers on the planet? Children!

Who are the most persistent humans on the planet? Children!

Who are interested in everything? Children!

Who are the most active? Children!

Who are the most sensual? Children!

Who get the most pleasure out of the most simple things? Children!

Who see things in the most novel ways? Children!

Who make the most astonishing and original associations? Children!

Who use both sides of their brains? Children!

WHO ARE THE MOST CREATIVE PEOPLE ON THE PLANET?

CHILDREN!

You are now one of them, again!

congratulations!

You are now one of a growing number of world-wide graduates of *The Power of Creative Intelligence*.

Think of the incredibly powerful position you are now in:

- you are now in full control of the knowledge of your magical left and right brains, and have already begun to accelerate the development of their synergetic capabilities
- you have understood and mastered the principles of the world's ultimate 'Swiss army knife of the brain' – the Mind-Map®, and are able to use it in all Creative Thinking and Problem-solving situations
- you have accomplished amazing feats artistically, and are unleashing that artistic power to improve your life in every possible way you can imagine
- you have redefined yourself as a musician and have a vast new 'language' at your fingertips (and brain cell tips!)
- you are aware that you can accelerate your Creativity and Thinking speed and power, and realize that you have an infinite capacity in this area
- through realizing the nature of Creative Flexibility, you have also realized that you are more precious and unique than you ever thought, and are on the road to becoming even more original and 'one of a kind'
- you have begun to release your poetic soul while looking at

the Universe with the eyes of that ultimate Creative Genius, the child.

You have accomplished all this while realizing increasingly, as you read through *The Power of Creative Intelligence*, that you possess between your ears the Universe's ultimate association machine: your astounding, amazing, and infinitely Creative, Human Brain!

On the road forward into your Creative future you will be accompanied by the great Creative Geniuses of history, as well as your own blossoming energy and Creative Intelligence.

Enjoy the journey!

Floreat Dendritae (May your brain cells flourish!)

Tony Buzan

If you want to learn more about Creative Intelligence, and to take part in games, quizzes, and discussions around all of the subjects covered here, why don't you visit

www.Mind-Map.com

or contact Tony at the Buzan Centre:

Buzan Centres Ltd
54 Parkstone Road
Poole, Dorset BH15 2PG
Tel: +44 (0) 1202 674676
Fax: +44 (0) 1202 674776

Buzan Centers Inc. (Americas)
PO Box 4
Palm Beach
FL 33480
USA
Tel: +1 561 881 0188
Fax: +1 561 434 1682

Or email: Buzan@Mind-Map.com

acknowledgements

Gratitude and thanks again to my top-of-the-bestseller-lists *Head First* team who have done it once again with *The Power of Creative Intelligence!* To my Commissioning Editor, Carole Tonkinson; my Editor, Charlotte Ridings; my artist and illustrator, Alan Burton; Paul Redhead; Toby Watson; Tim Burn; Yvette Cowles; Jo Lal; Megan Slyfield; Jacqui Caulton; Aislinn McCormick; and our new team member, Ariel Kahn.

Extract on page 105 from 'October Salmon' by Ted Hughes. First published by Faber & Faber in *The River*, © Ted Hughes 1983. Reproduced by kind permission of Faber & Faber.

Reproduction from Charles Darwin's notebook on page 49 sourced from Syndics of Cambridge University Library.

Michaelangelo nude, page 64, sourced from Witt Library, Courtauld Institute of Art/Moravcke Galerie, Brno.



about the author

Tony Buzan is the author of the million-copy bestsellers, *Use Both Sides of Your Brain*, *Use Your Head* and *The Mind Map Book*. He lectures all over the world and his work has been published in 50 countries and 20 languages. He also advises multi-national companies, governments, leading businesses, and international Olympic athletes.

Other books by Tony Buzan:

Head First: 10 Ways to Tap into Your Natural Genius

Head Strong: How to get Physically and Mentally Fit

The Power of Creative Intelligence

The Power of Spiritual Intelligence

The Power of Verbal Intelligence



credits

Cover © 2002 by HarperCollins Publishers, Inc.

Plate section illustrations by Alan and Emily Burton

Text illustrations by Alan Burton and Jennie Dooge

A Thorsons edition published 2001

Mind-Maps is a registered trademark of the Buzan Group

Plate section illustrations by Alan and Emily Burton

Text illustrations by Alan Burton and Jennie Dooge

POWER OF CREATIVE INTELLIGENCE Copyright © Tony Buzan 2001. All rights reserved under International and Pan-American Copyright Conventions. By payment of the required fees, you have been granted the non-exclusive, non-transferable right to access and read the text of this e-book on-screen. No part of this text may be reproduced, transmitted, down-loaded, decompiled, reverse engineered, or stored in or introduced into any information storage and retrieval system, in any form or by any means, whether electronic or mechanical, now known or hereinafter invented, without the express written permission of PerfectBound™.

Tony Buzan assert the moral right to be identified as the authors of this work.

PerfectBound™ and the PerfectBound™ logo are trademarks of HarperCollins Publishers, Inc.

Acrobat eBook Reader edition v July 2002 ISBN: 0-00-715008-3



about perfectbound

Australia

HarperCollins Publishers (Australia) Pty. Ltd.
25 Ryde Road (PO Box 321), Pymble, NSW 2073, Australia
<http://www.perfectbound.com.au>

Canada

HarperCollins Publishers Ltd.
55 Avenue Road, Suite 2900
Toronto, ON, M5R, 3L2, Canada
<http://www.harpercanada.com>

New Zealand

HarperCollinsPublishers (New Zealand) Limited
P O Box 1, Auckland, New Zealand
<http://www.perfectbound.co.nz>

United Kingdom

HarperCollins Publishers Ltd.
77–85 Fulham Palace Road, London, W6 8JB, UK
<http://www.fireandwater.co.uk>

United States

HarperCollins Publishers Inc.
10 East 53rd Street, New York, NY 10022, USA
<http://www.perfectbound.com>