Introduction

Your brain is an amazing organ. It is key to you feeling that incredible sense of achievement when you help someone out when they're stuck, see a child succeed at something for the first time and even when you win a new contract. It is instrumental in you making decisions from whether to work late or go home and spend time with your family to whether to have that chocolate bar at lunch or go to the gym. Your brain is centrally involved in the important things in life, whether you are fulfilled, living a life on purpose, reaching your potential and being who you are made to be.

This book is all about making your brain work, about your relationship with yourself and then with others. You have an incredibly valuable resource in your head and most people don't have much idea how to work with it optimally. Embarking on the journey of improving how you use your brain is only the start. The much bigger questions come when you consider how you use your working brain and these are completely up to you. Deciding what you want to be efficient, effective and productive at are big life questions and ones that deserve mindful attention for the rest of our lives.

The fictitious characters that feature in this book, Kate, Jessie and Ben all know they have untapped potential. They take responsibility for tapping into that and know that by understanding more about how they work they will be empowered to design and create more of the life that they want.

Your life has the potential to be fabulously rich. The content of those lives, how we respond to things, how we let events shape us and who we become are down to us. The Coaching sessions we observe during this book focus mainly on the work area of our characters' lives. Richard Branson's idea of not thinking of 'work

as work and play as play; it's all living' is a wonderful one. However, for an unsettling number of people work is something that they have to go back to on Monday morning, not something that they embrace and thoroughly enjoy. It is for that reason that we focus on ways to elevate the fulfilment, congruency and enjoyment of this area of life.

While the majority of the examples concentrate on business, the applications of the ways to make your brain work are widespread. For example, the things Kate learns as applied to the context of her work she can also apply to enrich her interactions with her children. Jessie would be able to use lessons she takes away to become more confident in her own skin. Ben has the opportunity to implement his new knowledge to improve his relationship with his new wife.

Neuroscience, the scientific study of the brain, underpins the content of this book. It is a wonderful discipline that has dramatically advanced our understanding of how we work over the last 20 years. There is a long road ahead of it still where many more insights will be discovered. As amazing as it is, it is only one of many areas of study that reveal truths. Learning about what it offers us and then referring to other subjects such as quantum physics or philosophy can paint an even richer picture.

Enjoy journeying with Kate, Jessie, Ben and their coach Stuart through challenging day-to-day experiences that have previously been depleting their enjoyment of life. Discover the neuroscience that helps them better understand what is actually going on during those times and how they can make changes that benefit themselves and those around them.

How to read this book

This book is designed for you if you are a busy professional who wants to get the most out of yourself. Each chapter has a range of different components to it, described below.

STORY TIME

Stories are easier for our brain to remember and help us understand concepts. They can enrich your experience of both the scientific underpinnings and the examples that each of the characters is going through.

EXPERIMENT TIME

Experiments are the backbone of neuroscience. They differentiate science from other disciplines by helping us to test theories to deepen our understanding. Reading about key experiments gives you the power of knowledge to apply the results to your life.

FOR YOUR INFORMATION TIME

These sections are included to give you important information that will best help you understand what else is going on. They may be purely interesting or may have more necessity to them in expanding on neuroscience topics.

MAKE YOUR BRAIN WORK (MYBW) TIPS

The end of each chapter finishes with tips that highlight some of the key points that will remind you of content from the chapter. These can be useful to refer back to and to work into an implementation plan.

You may choose to read the whole book at once, or more likely choose to go through it chapter at a time noting any insights you have about changes or applications to experiment with in your own life.

Meet the coach

Stuart is a neuro coach. He understands the neuroscience that underpins how people work. He is also a trained coach, so understands how to get the most out of people and facilitates them being the best they can be. When he works with professional people he plays many roles. Robert Dilts is a great researcher and thinker in the field of coaching, among others. In his excellent book *From Coach to Awakener* he describes the task of a coach as being to provide the 'necessary support and "guardianship" to help the client' successfully develop, grow and evolve at all levels of learning and change (Dilts, 2003). The levels Dilts identifies are: environmental, behavioural, capabilities, beliefs and values, identity and spiritual. In order to do this a coach may need to take on one of several different roles: guide, coach, teacher, mentor, sponsor and awakener. During most of Stuart's interactions with the three people in this book he acts in the role of guide, coach, teacher and mentor.

It is important for you to understand how your brain is working so you can optimize your performance. Ultimately this improves your quality of life and enables you to be happier in everything you are doing. We are naturally curious beings and like to understand how we work and how others work so this process and style of coaching often works well for professional people.

Meet the professionals

- Kate is a 54-year-old senior manager in a corporate position. She is divorced, has two grown-up children and is engaged to a lovely guy she's been seeing for three years. Her work, family and friends are everything to her.

- Jessie is a 32-year-old social entrepreneur who provides services to GP surgeries. After leaving a promising career as a doctor she has built this business up and now has a team of 20 staff. The business is growing rapidly and she is very passionate. She is single and enjoying living on her own for the first time after being with flatmates for years.
- Ben is a 26-year-old accountant, working in one of the Big 4 accountancy firms. He recently got married and tries to juggle the responsibilities of being a new husband with being a good employee and moving up the corporate ladder.

Part 1
YOU

Everything starts with you. You are central to everything. Your productivity, efficiency and effectiveness are all under your control. This is both exciting and a big responsibility. Part 1 of *Make Your Brain Work* addresses the individual challenges professionals like Kate, Ben and Jessie experience and what is happening in their brains at that time. It empowers them to change their action as a result of what they learn. Ultimately the aim is to help them sort out the things that are most frustrating them and holding them back.

We explore ways you can see new opportunities and control your world from the inside out. Learn how to get a handle on your states to enable you to enjoy life and your relationships more. We look at a strategic approach to trying to be everything to everyone that brings the additional benefit of increasing your integrity. Dive into optimizing how you learn new things and equip yourself to make more of a difference during your lifetime. Also master the neuroscience of habits so you can enjoy the extra brain space and energy you have for challenging tasks. These are some of the components covered in Part 1 of *Make Your Brain Work*.

1

Can a marshmallow predict your success?

What happens when planning isn't enough and your sense of control is giving way to a feeling of being overwhelmed

Kate recalls Monday morning to her coach. Kate is qualified as a chartered surveyor and is now a senior manager in a global real estate services firm. Some people see her job as boring, but Kate knows that the people side of it keeps her on her toes. The day had started very well. She is in line for a promotion and is really excited about the upcoming week. It will be a chance to show her boss what she is really capable of. She had kept her diary after work clear so she'd have plenty of time to relax at the end of each day.

People had been noticing that she worked hard and she knew how important someone's reputation is in the corporate world. Everything was competitive. She always strived to maintain a cool outlook on things, not wanting people ever to see her flap. Keeping a tight lid on her emotions seemed to make her feel as if she could control what people thought of her.

When she arrived at work some of her colleagues were there already, perhaps she should have come in earlier she found herself thinking. Hurriedly, she sat down at her desk and turned on her computer. As the e-mails started pouring in she saw her previously tidy inbox become filled with questions, problems and appointment requests. She had been feeling calm but as she looked at the list she'd left from Friday that she needed to get done today she started to feel agitated. Her breathing became shallower and her stomach muscles felt as if they were tightening.

As she stared at the screen of e-mails, opening a few, seeing that they'd take too long to sort out and moving on to the next, the secretary she shared with a couple of colleagues in her team popped her head around the door and informed her of a last-minute team meeting this morning at 11.00 am. Briskly acknowledging this additional time stealer Kate decided that she needed to get on with something to get it out of the way. Suddenly she remembered she needed to write a letter to her boss about why she wanted this promotion. She picked one of the jobs from Friday's list and started doing the client work that was fairly easy, just to get something done.

The phone rang and her secretary wanted to put through a new enquiry with some big questions. Always wanting to seem open to new work, Kate took the call. She felt distracted as she looked at the clock knowing there were several big e-mail tasks that needed her attention, she wanted to be in control for the meeting at 11.00 am and there was still client work waiting from Friday. As the gentleman on the other end of the phone explained his situation she made a few notes while also checking a few more e-mails.

As she hung up she added another round of tasks to Friday's list and felt her head start to pound gently. As she finally completed the client work from Friday she moved on to today's post. As she looked at a familiar file it dawned on her that there was a potentially huge problem she hadn't considered relevant for this case at all, but did that mean she'd missed something. Once again she felt her breathing becoming constricted and it became a struggle to think clearly.

Situation

So what is the situation for Kate on this Monday morning? Stuart, her coach, identified with her the following things to focus on:

- She felt she had too many e-mails to deal with.
- Her 'to do' list was too long when combined with the other things needing to be done.
- She took a scatter-gun approach to the tasks.
- She felt a pressure to get started and tick tasks off.
- She felt worried about writing the letter well enough.
- She was trying to multitask.
- She had symptoms of being overwhelmed several times, including when seeing something new to her.

This chapter helps you to understand how your brain gets overwhelmed and how instead to be in control in a way that enables you to come up with great creative ideas and solutions, eliminate interruptions and produce better quality work. The bonus is increased efficiency and effectiveness.

Possibilities

Stuart starts by looking at Kate's feeling of being overwhelmed. Different people get overwhelmed by different things and in different situations. Some people may need to be training for a marathon, managing several accounts, be a parent to a new baby and then have to deal with their car breaking down in order to start feeling overwhelmed. For other people being asked if they'd like a BLT or tuna melt sandwich could be the thing that adds just that little bit too much to their already full mind and makes them feel overwhelmed.

We can almost think of the brain as having a strategy for becoming overwhelmed. Rather than taking the approach of suggesting to

Kate that she just tries to keep calm and take things one at a time, which tends to be next to useless, we're going to look at what is actually happening when a person gets overwhelmed and, as a result, what that person could do differently. General high-level advice is one thing, and occasionally may be effective, but understanding what is actually going on, for everyone, from a neuroscience perspective means that you can draw out a plan that you have designed definitely to work for you.

Let's jump right into meeting the main player when we're working with becoming overwhelmed. The central thing for us to be aware of is actually an area of the brain. It is called the prefrontal cortex (PFC).

FACTS ABOUT THE PREFRONTAL CORTEX

It is right at the front of the brain, just behind your forehead. Its role is classically described as like that of a CEO (if you are business minded) or a conductor (if you are musically minded). In short, it is the boss, it is responsible for your 'executive' functions, which means your ability to think, choose, plan etc.

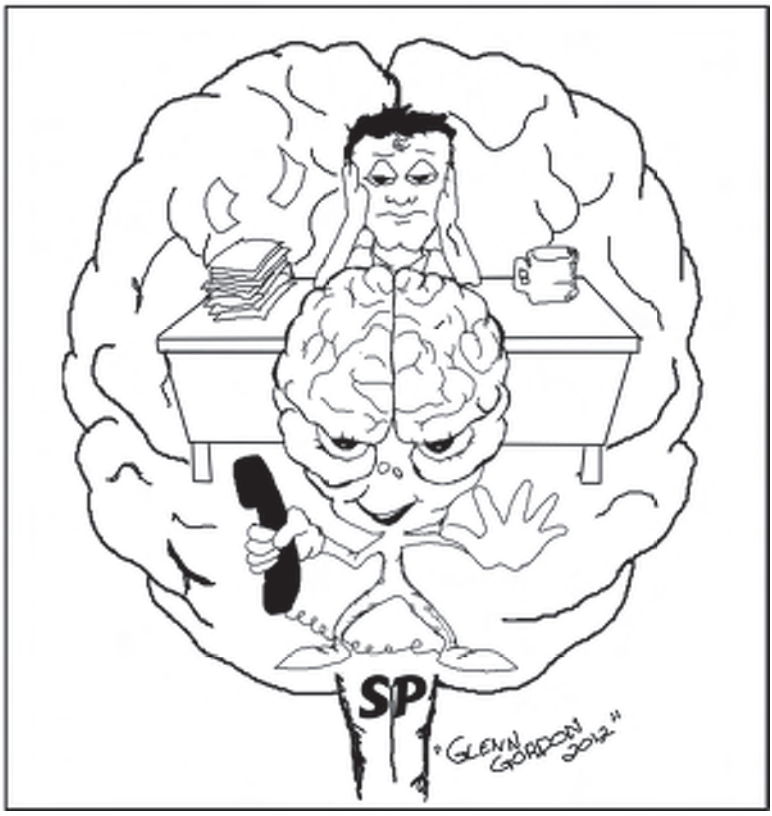
Over the years it has developed considerably, and recent studies indicate that meditation increases its size further still.

It is hugely energy hungry, but gets drained quickly. Stress impairs its ability to use energy.

Structurally, it is part of your frontal lobe, which is the area at the front most part of your brain.

Prioritization

Stuart feels it is important that Kate looks a little more closely at her prioritization. He asks her what she thinks about it, whether she ever does it, how she thinks it works. Prioritization is one



of those things that everyone knows they should do. They know intellectually that it's supposed to be a good idea, but few people do it effectively.

Kate's lack of understanding about how prioritization actually works means that when she is doing it, she isn't doing it in a way that will help her. By feeling pressured to start ticking things off her list she tries to jump right in to doing tasks, but the downside to this is she starts using valuable prefrontal cortex energy. She is tiring out her CEO (the PFC part of her brain). Her CEO is actually best equipped to do the prioritizing. So by exhausting it, if she ever gives it the chance to do the prioritizing it will be too tired and do a very bad job.

Prioritization takes a lot of energy so it is best done with a strong focus. So how do we focus? (And 'I just focus' doesn't cut it as an answer here). Anytime you are concentrating, learning with great intent or seriously paying attention to someone or thing then your frontal lobe, of which your PFC is a part, is keeping a tight rein on your brain to stop it wandering off to other activities. The frontal lobe acts a bit like a bouncer – fending off any unwanted signals from the body, any emotions, and any environmental senses. The bouncer makes any sensory or motor information quiet, meaning that we tend to find ourselves being quite still. While the bouncer is outside fending off unwanted visitors, inside we are in a form of trance.

Picturing your goal

Stepping away from the analogy, let's look at the actual benefit of prioritizing. When you are being optimally efficient and effective you will experience a state that feels similar to the state of 'flow'. (The actual state of flow has several components to it, which may or may not be additionally present). What does this feel like? You feel still, things seem quiet and you don't have any strong emotions. In fact the thing you are focusing on becomes more real to you than anything else. Time passes without you realizing. Scientists call this whole process lowering the signal-to-noise ratio. You can imagine how helpful this state could be when you want to get a big important task done, like the important letter Kate had to write, which was really going to stretch her prefrontal cortex. It would mean she would feel relaxed, focused and could proactively work through the task without constantly having fleeting thoughts of other things she needed to do jump into her head. The end resulting letter would reflect her best work.

Neuroscientists believe that being able to see and hold in your mind a picture of what you want to do makes it possible to then do it. This is directly linked to the emotional and motivational processing of this intention. When prioritization takes place it means you then

have the programming telling you when and under what circumstances you will do the task.

Another component of prioritization can involve the sacrificing of immediate gratification for delayed gratification. You need to be able to place value judgements on your outcomes in order to choose which to work on first, and to place enough value on something to do it at all. Have you ever found yourself wishing you were the type of person who went to the gym regularly, or meditated or ate more vegetables or remembered people's birthdays or anything else? But you found yourself week after week, month after month, even year after year not doing it? This again comes down to your frontal lobe to sort out. It is not that you don't really want the result that going to the gym will bring; you absolutely want a fit, toned body; it's more complex than that. It may be that your brain has equated gym attendance with a poor relationship (because most people you know who regularly go to the gym are single or in unhappy relationships). It may be that when you do go to the gym you work out so hard that you are in agony every time you laugh or walk for days afterwards. It may even just be that you want other things (like a bottle of wine and rest in front of the television every evening more than you want the fit, toned body).

CAN A MARSHMALLOW PREDICT YOUR SUCCESS?

The Stanford Marshmallow Experiment leads us to believe it can. In 1972 a psychologist called Walter Mischel conducted an experiment with around 600 pre-school children. Individually the children were led into a plain room, devoid of any distractions, that had their choice of treat (Oreo cookie, marshmallow or pretzel) on a table by a chair. They were told that they could eat the treat and ring the bell at any time (signifying they had eaten it) or wait until the researcher returned, at which point they would be rewarded with a second of their chosen treat. Watching the children wait is quite an experience. Some cover their eyes with their hands, others tug their pigtails, some stroked the treat, as if they were caring for it, and some even start kicking the desk, while some turn away from the temptation.

A third of the children could delay their gratification long enough to get a second treat. This is interesting, but what is even more interesting is the follow up study, which showed that the child who could wait 15 minutes had an SAT score that was, on average, 210 points higher than that of the child who could wait only 30 seconds.

Starting with the end in mind

Our ability to delay gratification or to exercise self-control has a correlation with achievement. Our anterior prefrontal cortex (a part of that familiar CEO again) is involved in abstract problem solving and keeping track of goals. Yale University researchers recently scanned 103 people and found that delaying gratification involves the ability to imagine a future event clearly. One researcher, Jeremy Gray, said you need 'a sort of far-sightedness'.

If Kate is constantly feeling the need for immediate gratification to feel good about getting 'on with something to get it out of the way' to 'just get it done' then the bigger tasks just aren't going to get done. Calling them bigger tasks isn't even fair, because even if they start as bigger tasks part of the process should be to break them down into manageable parts.

Classic productivity teachings steer us to beginning things with an awareness of what the end looks like and the marshmallow experiment demonstrates the huge importance of this. The advances in technology mean that we can see that the anterior prefrontal cortex is vital for being able to do this.

Thousands of experiments including the classic brain scan, functional magnetic resonance imaging (fMRI), allow us to see this area of the brain lighting up when a person is performing cognitive functions. We also learn from experiments with people who have brain damage, such as Phineas Gage who became unable to make good decisions after sustaining an injury to this part of his brain. Later in this chapter we will look at what Kate can do to keep her prefrontal cortex working optimally.

Prefrontal cortex

So what is the motivation for ensuring that our PFC is in optimal working condition? When our PFC is not working optimally we find ourselves:

- feeling lazy;
- feeling lethargic;
- uninspired;
- easily distracted;
- being poor at completing things;
- fixing attention on repetitive negative thoughts;
- being disorganized;
- being forgetful;
- feeling overly emotional.

On the other hand, when Kate's PFC is working in tip top condition she can look forward to:

- intentional awareness;
- a long attention span;
- being able to contemplate possibilities;
- being able to plan;
- being able to stick to the plan;
- focusing easily.

When the PFC is overworked it doesn't function well at all. All the symptoms mentioned previously can occur and this makes it very difficult to be effective, let alone efficient, which is often very frustrating to the people trying to get through the day. During this time it's quite common to feel as if something is wrong and perhaps to fall back on old habits. This is a form of survival mechanism. When people find themselves micromanaging, controlling or punishing there is often a brain deficit involved. This doesn't always mean

something is overactive; an underactive PFC causes problems too. Dopamine is a neurotransmitter that has many functions for the brain including reward, motivation, working memory and attention. When the brain has a lowered ability to use or to access dopamine it means that other brain areas aren't being quietened down to enable the brain to focus on one thing at a time. This makes life difficult for us because we struggle to focus, so become less efficient.

CAKE OR FRUIT SALAD

The Stanford professor Baba Shiv carried out a fantastic experiment. He thought that 'cognitive load' (having lots to hold in your head – a situation most professionals find themselves in) might influence self-control. He gave half his volunteers a two-digit number to remember (representing a low cognitive load) and gave the other half a seven-digit number (a high load). The volunteers were then told to walk to another room in the building and in so doing pass a table where they had to choose between chocolate cake or fruit salad. Of the people with the high load, 59 per cent opted for cake whereas only 37 per cent of the people with the low load did.

Shiv speculates that remembering seven numbers required cognitive resources that had to come from somewhere, and in this case were taken from our ability to control our urges! Anatomically this is plausible because working memory (where we 'store' the seven or two numbers) and self-control are both located in our prefrontal cortex. The neurons (brain cells) that would normally be helping us make healthy food choices were otherwise engaged in remembering seven numbers. In those instances we have to rely on our more impulsive emotions, such as 'mmmm yummy – chocolate cake please'.

Practical prioritization

The most important thing Kate takes away from this is that she needs to get clear on the things that she wants to do before just

jumping into doing things. Prioritization needs to be her priority! She decides to set aside 10 minutes at the start of the day to look properly at what order she wants to do things in and to visualize the end result of each of them.

Since Kate is serious about this she ensures that she puts the 10 minutes in her diary. There are many ways to prioritize. Kate naturally finds that writing out a big list of everything that is in her head is useful. Then she goes through the list and puts a dot by anything that definitely needs to happen today. She briefly closes her eyes and asks herself what she will see, hear and feel when she has completed each of the dotted tasks – this creates a strong connection neurologically with the task she wants to achieve. She can also at this point get a feel for how long it will take her to complete each task. Once she has all these components she can instinctively number the tasks in order of how they will fit together best. Anything that isn't vital for today or doesn't fit into today gets transferred to a new list for tomorrow or another day.

Knowing that you may not get the prioritization spot on at first is a comfort and Stuart recommends that you work on two-week trial programmes. So you choose a strategy, trial it as you would a scientific experiment, not varying anything but being observant about how it works for you. Then at the end of the two weeks evaluate what went well and what could be improved upon. Decide on new parameters and begin another two-week trial.

New information

When Kate gets a call from another client she starts to feel uneasy again. She is hearing new information; they are mentioning things that haven't come up before. This is very common. Imagine a situation where a boss or a colleague tells you something that was new to you. Your interest levels skyrocket. You pay attention. There is a very important chemical at work inside you at this time, which we'll come back to later. For now, let's look at the area of the brain that is getting excited.

THE NOVELTY FACTOR

Novelty sends the prefrontal cortex crazy, if it is just ticking along something new really wakes it up. A neurologist called Marcus Raichle did several experiments to find out what was going on. He gave individuals a task that required them to say an appropriate verb to a visually presented noun. Initially when they were presented with the task their blood flow to their frontal lobe reached its highest level – indicating lots of activity. As they continued to do the task the frontal lobe chilled out and their involvement (based on blood flow) pretty much disappeared. A new task was then given to them, similar to the first, but with differences. The blood flow increased again, but not to the same level as before.

Summary: the frontal lobe is involved when things are novel. You will remember things more easily when they are novel. Your engagement with novel things is higher.

When things are new your frontal lobe is being stretched so you need to keep everything else as simple and streamlined as possible to reduce the pressure on them (otherwise you'll feel overwhelmed and struggle to process anything). In Kate's mind she is merging everything together. This doesn't help her brain process the new information. The best thing when confronted with new data (in whatever form) is to separate it as something new. Once this is done you can then break down what this new information is and link it to things that are familiar to you. If you don't want to be using up your thinking power on something new then looking for ways to link it to something familiar is great because it does not then create the same level of frontal lobe activity.

For example, if you are told that you need to start 'tweeting' your frontal lobe will go into overdrive if you've never done it before. This in itself is fine, but you would start to feel overwhelmed if you were also thinking about all the reports you need to write, the people you need to schedule meetings with and the fact that you

promised to take a holiday in the next month. The best thing to do in this situation is to recognize that 'tweeting' is new for you, but you're great at LinkedIn, which is similar. When people ask 'what's that like?' they are looking for something familiar they can connect with. Unconsciously Kate will now be considering that she learnt to get good at LinkedIn, which means that she can learn to be good at Twitter.

Multi or mono

The dreaded multitasking – it is at epidemic levels. Kate is quite normal to try to do it at work, at home, even in bed. The famous Blackberry (and now the iPhone) enticed people to up their game in the multitasking arena. It wasn't enough to reply to e-mails while in the office and on the phone, something Kate regularly diced with. Now Kate regularly is on the phone to her mother, cooking dinner, checking Facebook on her laptop and checking work e-mails on her iPhone. All the while she is keeping a 'relaxing' television programme on in the background to 'help her switch off'. If it didn't have such important consequences it would be funny!

The prefrontal cortex, like a good conductor, likes to focus on one thing at a time. Conductors never play a bar of one piece of music then move on to play eight bars of another piece. Every time a conductor decides to play another piece all the musicians would have to put their instruments down, find the other piece of music from their folder, pick up their instruments again then start playing. So in moving from one piece of music to another the amount of time wasted would be huge and it takes a lot of energy to keep switching. Equally, if the conductor thought he could save time by practising two pieces at once, you'd get a big jumble. Bars from each piece would have to be missed out. Things would be confusing. Neither piece would be played well, and it would be hugely tiring for the musicians. This is exactly what happens when Kate is trying

to multitask. She misses bits of what the client is saying. She can only scan the e-mail, missing bits of that when she is tuning into the client on the phone. Afterwards she has expended a huge amount of valuable energy and feels drained.

MULTI-TASKING... PERHAPS THE NEW ENEMY OF PRODUCTIVITY

A professor of mathematical psychology called David Meyer took a group of young adults to test what happens when people are switching between things quickly. The experiment involved the participants working out mathematical problems and identifying shapes. When they had to switch between the tasks their accuracy and their speed decreased compared to when they could perform one and then the other. In some cases multitasking added 50 per cent to the time required. Imagine a person working a 12-hour day and achieving the same amount of results as a person working 8 hours, but with more mistakes and less elegance. One comment was: 'Not only the speed of performance, the accuracy of performance, but what I call the fluency of performance, the gracefulness of their performance, was negatively influenced by the overload of multitasking.'

There is no conclusion other than to get excited about mono-tasking – it'll be the new multitasking – only more efficient and effective and subsequently more productive.

Your plastic brain

Michael Merzenich, who you will meet again later, is probably the world's leading researcher on the best thing since sliced bread: neuroplasticity. We will cover this in more depth in Chapter 3. However, for now it will benefit Kate to know that her brain can, and indeed does, change.

As a pianist Kate is now an elegant and graceful musician. It wasn't always like this though. When she was learning as a child she used her whole upper body, her face was screwed up and her elbow and shoulder seemed to jar with every note. At that time a massive number of neurons (brain cells) were required for her to play each note. Now, she only requires the specialized ones that are very good at it. Obviously this is vastly more efficient.

MONKEY BUSINESS

Merzenich is famous for many experiments with monkeys. In one he trained a monkey to touch a spinning disk with a certain amount of pressure for a certain amount of time. He was then rewarded with a banana pellet reward (the monkey, not Merzenich). The monkey's brain was mapped before and after the experiments. What happened has huge implications. The overall area of that particular map in the monkey's brain got bigger. This makes sense as more brain resources are being dedicated to the more frequently carried out tasks. The individual neuron's receptive fields got smaller – more accurate – and only fired when small corresponding parts of its fingertip touched the disk. So there were more accurate neurons available to do this task.

Here's where things get really fascinating. Merzenich found that as these trained neurons got more efficient they processed faster. This means that our speed of thought is plastic. Through deliberate, focused repetition our neurons are being trained to fire more quickly. They also don't need to rest for as long between actions. Imagine how much more powerful and effective you would be if you could think quicker. It doesn't even stop there, the faster communications are also clearer, so more likely to fire in sync with other fast communications ultimately making more powerful networks. More powerful networks or messages make it more likely we'll remember something.

The final piece in this research extravaganza is that these brilliant changes, which are available to you, only stick long term if you pay conscious attention to the tasks as you do them. So if Kate wants the benefit of faster thinking capacity and the ability to recall things easily in the future then she needs to pay conscious attention to one thing at a time. This is relatively easy to do, with practice. You'll have experienced times when you are really present, perhaps at an important meeting, or while listening intently to a friend, or watching an important match. Your focus is on what you are doing. You are actively present. In contrast, you'll be able to remember a time when you think you are reading something, but really none of it is going in because you are thinking about what

you're going to have for lunch, or do at the weekend, or another important paper you need to read. This is the difference between paying conscious attention and unconsciously just moving through things.

Reassuringly flexible

Kate starts to wonder how we can even switch our attention between things at all and Stuart takes this opportunity to build up Kate's faith in her brain as being designed to serve her best, so long as she chooses to use it in the way it is designed.

The brain has the ability to maintain a set of mental activities, such as reading an e-mail, in a stable way. It can do that for a period of time and do it very well. Then it can make a quick switch to another set of activities, such as listening to a colleague, or talking on the phone. These will be maintained in an equally stable way. This is called 'dynamic bystability'. Switching backwards and forwards quickly, as happens during multi-tasking, still attracts a big energy cost. The way the dynamic bystability works is still being investigated but we believe it has to do with two forms of dopamine (a neurotransmitter) receptors. One of which has a stabilizing effect and the other has a destabilizing or updating effect.

Enriching your potential

Stuart shares a particular experiment that he hopes will inspire Kate to boost her brain potential so she can cope with more things before becoming overwhelmed. Knowing that Kate really wants this promotion helps guide her coach to share the most appropriate stories and research that will best serve her. Sometimes Kate feels that because there is so much to do she shouldn't go and see her friends, or do the things she enjoys such as go to the theatre or go for massages. Stuart wants to show her that this isn't the case and this experiment is the first ingredient in showing her.

LIVING THE LIFE OF RAT LUXURY

Back in the 1970s a neuroscientist by the name of Bill Greenough did some experiments with rats and their living accommodation. One poor group of rats drew the short straw and ended up living alone with nothing to do. The other group were bestowed comparatively plush surroundings. They had exercise wheels, ladders to climb, and other rats to talk to. Greenough called it 'the rat equivalent of Disneyland'. These lucky rats soon became noticeably more physically and socially active, as far as laboratory rats can.

Things became really interesting when their brains were later examined. The 'enriched' environment rats had 25 per cent more synapses (connections between a neuron and another cell) per neuron than their poor relatives. These additional synapses meant the rats were cleverer and quicker to find their way through mazes and were able to learn landmarks faster.

To reduce the problem of becoming overwhelmed it's important that we look at both the short-term strategy for getting rid of the problems being faced but also the long-term strategy that will reduce the frequency of the problems arising. By creating your world as your very own Disneyland, whatever that means to you, you are going to upgrade your brain, making it easier and quicker for you to work things out in the future.

Action

Kate decides to make some changes based on everything she learnt and the things she reflected on during the coaching session. She makes a list of all the things she wants to change eventually, and then picks just one a week to start implementing. If she finds she struggles with it one week she plans to continue focusing on that change for a second week before adding another thing into the mix. She finds a list entitled 'to do' not quite as inspiring or uplifting as 'action' so names hers accordingly.

Kate's action list

- Write the letter for the promotion first thing in the morning, with e-mails and phone turned off.
- Decide on times of the day to tackle e-mails (10.00–11.00 am, 2.00–2.30 pm, 5.00–5.30 pm).
- If there isn't enough time to tackle all the e-mails in the slot allocated schedule another time to look at the ones left over.
- Choose and schedule the big priorities for the week on Sunday night or Monday morning.
- Schedule 10 minutes each evening to prioritize the following day.
- Check that plan each morning, make sure you know your priorities and get them done first.
- Practise doing one thing at a time and paying conscious attention to it.
- Go for a massage this week.
- Trial everything for two weeks then re-evaluate.

MYBW top tips to prevent being overwhelmed

- Turn off the e-mail function of your mobile phone in the evening so your brain has down time in the morning before you start work.
- Prioritize the big weekly tasks first then smaller tasks on a daily basis (experiment with the night before or first thing in the morning to see which works best for you).
- Turn on e-mails only for certain windows of the day.
- Mono-task for short- and long-term benefits.
- Decide that you are in charge of your time and acknowledge that you are choosing how to spend your time.
- Become your own best detective, identifying how you get overwhelmed and how you avoid it.

MYBW top benefits for mastering your feelings of being overwhelmed

- Come up with great ideas during quiet time when you're not being interrupted by e-mails or calls.
- Save time that previously you'd have spent thinking about what to do next every time you start a new task during the day. Also be more focused when you start a new task because your unconscious mind has been working on it for you overnight.
- Increase your efficiency and effectiveness by eliminating interruptions.
- Increase your perception of autonomy, by enabling you to be more in control of your time, can lead to more productive action and better quality work.