

CHAPTER TEN

USING THE JOURNEY METHOD

To remember in detail all the activities you were involved in yesterday, if you're like me you begin at the start of the day and "walk" yourself through the locations to remember what you did at each place. Then, if I ask you what you had for lunch yesterday, you probably catch an image of yourself in situ over your food. Perhaps you were at your kitchen table, at your work station or in a café or restaurant. Even if you ate on the move, you'd probably picture yourself wherever you were, walking and simultaneously munching. From this reference point – whichever it is – you'd work backwards and recall what you were eating. Job done.

Places provide anchors for our memories – they are the reference points by which we plot our movement through time. I believe that without these, our thought processes and specifically our memories would be far more chaotic, random and impossible to recapture. If I'm asked to give an overview of my life, I plot my movements through all the different towns and villages I've lived in. To reveal my experiences with education, I recall first the images of the different schools I went to. For my career, I start by picturing myself in each of the buildings where I have worked.

The three keys to developing a highly efficient memory are Association, Location and Imagination (think of Mohammad ALI to help you remember them) – and once I'd devised the Journey Method, I'd finally arrived at the ultimate solution to the challenge I'd set myself when I first saw Creighton Carvello memorize that deck of cards on TV.

How does it work?

I've told you about how I used the Journey Method to memorize my first deck of cards, but to introduce you to using the method yourself I want to take you specifically through my thought processes as I use a short, seven-stage journey around a typical home to memorize a list of items.

Here are the first seven stages on my Home Journey:

STAGE 1 Bedroom window

STAGE 2 Bedside table

STAGE 3 Landing

STAGE 4 Bathroom

STAGE 5 Linen cupboard

STAGE 6 Living room

STAGE 7 Kitchen

First, picture yourself walking the journey in logical steps. Don't worry if this route doesn't exactly match your own home. You can adapt the method to fit your house later on in the process. For now, learn this route so that you can walk it in your mind's eye backwards and forwards. Once you're confident you can do this, you're ready to use it as a set of hooks for a list of seven items. Again, we've talked about how people are easier to hook on to journey stages than objects, but objects provide good test cases while you're getting used to the method (you're also more likely, in your daily life, to want to memorize objects – in the form of shopping lists, or perhaps gifts given to you on your birthday so that you can write thank-you notes).

INSIDE MY MIND: IT'S ALL GREEK!

When, during my trials with playing cards, I came to the conclusion that using a journey was the most effective way to memorize a list of information, I thought I had developed a new system all of my own. Some years later it came as a bit of a blow to discover that this method was actually thousands of years old! In oral traditions the world over, elders told stories to preserve their customs and cultures for future generations. It turned out that, with papyrus for writing in scarce supply, the ancient Greeks had been using "loci" (places) as an aide-mémoire considerably before I discovered it! So, how did they come up with the system?

The story goes that the ancient Greek poet Simonides of Ceos (c.556– c.468BC) narrowly escaped death when he was called away from a victory banquet to meet two young men outside the palace. When he arrived outside, Simonides couldn't find his visitors, and turned to go back to the feast. However, as he did so an earthquake struck and the banquet hall collapsed, killing the guests inside. Later, Simonides was asked to identify the bodies of the other diners, which he did by recalling who had been sitting where at the table. Historians claim that this was the birth of the system of memory loci. From then on ancient Greek orators placed elements of their stories at certain places along a mental route in order to recall the story in the right order.

While I have to admit I was a bit shocked to discover that I wasn't even close to being the first person ever to use such a system, I was also reassured – if a system like the Journey Method had been good enough for the ancient Greeks, I must have struck gold.

As strange as it may sound, I recommend that you don't approach this exercise with the intention of making lots of effort to memorize the items. The whole magic of the

Journey Method is that it's virtually effortless – you don't have to try too hard, because your powerful imagination and skill at making associations along the familiar journey will result in you automatically recalling the items in their original sequence. Don't forget to hold on to your first associations, which are the ones most likely to come back to you. Here are your items:

FEATHER • TEASPOON • DECKCHAIR • SNAIL •
UMBRELLA • ROSES • HAMMOCK

STAGE 1

Bedroom window/Feather

The image that springs to my mind is of a white feather that slowly zigzags down past the bedroom window. Try to make sense of what you imagine to make this image stick. Think of a logical reason why the feather would be floating past – perhaps a bird has dropped it, or the wind has blown it from a nest in your guttering; or perhaps it is blowing out of your bedroom window, having come free from your feather duvet or pillow. Choose the association that feels most natural and logical to you.

STAGE 2

Bedside table/Teaspoon

At stage 2, I see a teaspoon on the bedside table. That's pretty straightforward, so to help the image stick, I have to ask why it's there. Perhaps it's been left behind from the morning cup of tea, or maybe it was left there after I took a nighttime dose of medicine? Remember how important it is to use your senses to firm up your associations (see [p.26](#))? I want to imagine that I lick the teaspoon, hoping the taste on it will give me a clue as to why it's there and what it has been used for. I fully immerse myself in the scenario.

STAGE 3

Landing/Deckchair

As I move out to the landing, I find a deckchair blocking my path. There's lots of opportunity here to use your senses. What colour is the chair? Is its frame wooden or metal and is it smooth or rough? Do you have to step around the chair or do you have to lift it to move it out of the way? I also ask myself why would someone have left it there? Were they waiting to put it back in the loft? Perhaps a child brought it upstairs to play with it? See yourself sidestepping the chair or collapsing it – remember you're the star of your mind-movie, so do what seems natural. Perhaps you feel a bit agitated or frustrated about the obstruction – all the better if you can use your emotions to make the scene feel more real. Remember that if you're actually part of the action, you're more likely to trick your brain into thinking it's really happened (see [pp.39–40](#)).

STAGE 4

Bathroom/Snail

This stage poses slightly more problems, because a clear line of logic is harder to find. However, this just means that it's time to make one of those associations you practised in [Chapter 6](#). Are there snails all over the bathtub, up the walls, and over the basin? Or can you just see a single snail that's left trails of silvery slime across the tiles on the floor? Perhaps there's only one snail but it's huge and oversized? Personally, I find that exaggerating size interferes with my need for logic and unnecessarily increases the workload on my brain, so I'd probably go for something more believable (the slime trails, perhaps).

STAGE 5

Linen cupboard/Umbrella

Any cupboard on my journeys simply has to be opened! I imagine myself pulling back the door and a bright red umbrella falling out. The colour is important in the process of memorization because it makes the association more vivid. I also try to conjure up the sound of the umbrella as it clunks awkwardly to the floor. Why was the umbrella in the cupboard in the first place? Is it closed or open? Is it a type that's small and compact or is it a large umbrella with a long handle? Who does it belong to? Do you pick it up to put it back?

STAGE 6

Living room/Roses

This room smells of fragrant roses. On top of the coffee table is a vase bursting with bright yellow blooms. You can make them any colour you like. I chose yellow as it's a happy colour – this is how the recipient of the roses may have felt when she or he received them. Why were they given? Perhaps they're a birthday gift?

STAGE 7

Kitchen/Hammock

when I can't find any obvious sense to an association, I put myself inside the scene. I picture a hammock hanging from kitchen-cupboard handles, blocking the path to the back door. I throw myself into the hammock and imagine swinging from side to side and bumping into the refrigerator in the process.

Your journey is complete, and now I bet that you'll be able to answer the following questions with ease (and then certainly by replaying the scene in your head until you come to the answer):

- What item was in the bathroom?

- Where were the roses?
- What is the fourth item on the list?
- Which item is between the feather and the snail?
- Can you name all seven items in order?

Now try the exercise on the following pages, and then read the conclusion on [page 62](#).

EXERCISE 6: Your First Journey

Now it's time for you to test the Journey Method for yourself – this time I won't put ideas into your head, because your own associations will be much stronger than links that I make for you. Follow the steps and as always try not to edit the first links that come to you, but do try to make them as vivid as possible, using all your senses.

- 1 Devise a route around your house consisting of 12 stages. If you run out of indoor places, extend the journey through your garden and along the road. Make sure the route is logical – don't make stage 1 the bedroom, stage 2 the kitchen and stage 3 your en suite, for example. Second, don't return to a room once you've left it. Write down the list of stages if it helps you to plan your journey – this is what I did when I first developed my own routes back in 1987.
- 2 Run through the journey in your mind over and over until you can recall it forwards and backwards without thinking. It may help to actually walk the journey a few times, too, if it's practical to do so.
- 3 Once you're confident you know your journey inside out, apply the Journey Method to memorize the following list of 12 items in the correct order. Allow your vivid

imagination to come out to play – remember, use logic and creativity and your senses and emotions. As you move along the route, don't be tempted to look back over the list to refresh your memory. Trust the power of your mind and have faith that the journey will preserve the items and their order. Take as long as you need, but usually a couple of minutes is enough.

CAKE • HORSE • NEWSPAPER • KETTLE • WHIP
• CANNON • BANANA • TELEPHONE • ELVIS
PRESLEY • TELESCOPE • BELL • COFFEE

4 Now, cover the list and see how many items you can recall in the exact order. Write the items down. Some will come back to you more easily than others. For example, Elvis Presley was probably one of the easy ones – remember how I discovered that people work far better with the Journey Method than objects, which is why I turned all my playing cards into people? A score of nine or more items is very good.

5 Now, to prove to yourself the thoroughness of the method, answer the following test questions:

- Which item on the list is between Elvis and the bell?
- Which is the third item on the list?
- Which number position on the list is the cannon?
- Which item follows the banana?
- How many items can you recall correctly in reverse order?

Recalling the items in reverse is a toughie. So, congratulations if you got all 12 right. Don't worry if you didn't – it will get easier with practice.

Conclusion: Demystifying the magic

Here's another question for you. Which of the following functions of the left and right hemispheres of your brain have you used for the practical elements of this chapter? And how many of your senses did you use? The answer is – the lot!

Thanks to your left brain, you used sequence, logic, speech, analysis and numeracy (for example, to work out which was the fourth item on the list on [page 59](#)), while your right brain gave you imagination, colour, dimension (the size and shape of the objects) and spatial awareness (a sense of location and place). Your senses gave you taste, touch, sight, smell and sound. The two sides of your brain and your senses were all working in harmony.

The exercise on the previous pages is one of the most important in this book, because for the first time you're devising your own journey and using it to memorize a list of items I've given you. I can tell you everything I know, think or have discovered about the Journey Method, but until you start using it for yourself, including devising your own journeys, it will still be an abstract principle that has no bearing on your ability to memorize day to day. I love this bit in the tutoring process, because it's now that everything I've tried to explain so far comes together and you can see for yourself the magic of the Journey Method.

CHAPTER ELEVEN

EVIDENCE FOR THE JOURNEY

METHOD JOURNEY METHOD

So far, everything I've taught you about the Journey Method suggests that for the best results you use a journey that you know – a real one – to hook items onto. But is there any scientific basis for this? Does repeated use of these journeys in itself make your memory better? And why are real journeys so effective?

In 2002, along with nine other “superior memorizers”, I took part in a study conducted by the Institute of Neurology in London to see what happens in our brains as we memorize information.

We underwent Functional Magnetic Resonance Imaging (fMRI): in turn, each of us had brain scans, first to look for anything unusual or irregular in our brains' structure and, second, to see what happened as we committed information to memory. Our results were measured against a control group who had no knowledge of memory techniques. The study concluded that there was nothing genius-like about our brains – structurally, all the “superior memorizers” have brains just like everyone else's.

However, the evidence also showed that when we mnemonists memorize information, we use “spatial learning strategy”. This means that we use the region in our brains, the hippocampus, that is especially important for spatial memory (actually, there are two *hippocampi*, but in speech we tend to refer to them collectively as simply the hippocampus). This is the part of the memory that we all use to record information about our surroundings and to orient ourselves within a space, whether it's a room, a building, a park or a city. In essence, the hippocampus helps us not to

get lost! The scientific evidence for this makes the efficacy of the Journey Method easier to understand.

When I memorize hundreds of words, numbers or playing cards, I navigate routes around familiar golf courses, holiday locations, towns, villages, friends' houses and gardens, and favourite walks. Every time I do this, I activate my hippocampal region, which gets stronger, in turn strengthening my overall memory. One body of research shows that the hippocampus region of London black cab drivers, who spend three years learning "The Knowledge", about 500 routes around the city, tends to be slightly larger than that of the rest of the population. The more experienced the driver, the bigger the hippocampus. I believe that this is a direct result of having a job that requires hours of navigation. It's really no different from the principle that if you want to have a flatter stomach, you need to exercise your abdominal muscles regularly.

Sense of place and episodic memory

When I stand in a place I know extremely well, such as my kitchen, I attach so many personal memories to it that I can perceive that room in a number of different ways. It's almost as though the room can look completely different depending on the particular memories I conjure up. If you're in a place you've known well for several years, look around you. Now try to recall the image of yourself in the same place, but at an earlier time in your life, or even just on a different day. Does the space feel any different?

When I think about a certain place in relation to a certain memory, the place itself is reinvented according to the mood of that recollection. I believe that our sense of place is tied up not only with our spatial awareness, but also with our episodic memory – the part of the memory that records events that we've been involved in. Your episodic memory is your internal autobiography. When a place holds a chapter (or, even better, chapters) of that story for you,

your memory or memories of it, and therefore its efficacy as a memory tool, are very strong.

Ever the investigator, I have been curious to know whether I can simulate this kind of connection to a place. So, using gaming software to help me, I've experimented using virtual reality worlds to develop invented routes for memorizing information. I've even used them in memory competitions. Although I can still get a sense of place from them, I find that the virtual journeys are not as effective as real ones. Somehow my brain is not entirely convinced by them. The conclusion, then, is simple: the most successful routes are those that carry a rich supply of episodic memories and provide strong spatial orientation. This means that the most familiar locations usually provide the best journeys for the Journey Method.

The Von Restorff Effect

However, sense of place is not the only thing that makes the Journey Method work. Its efficacy is also tightly bound up with the way in which we attach images to each of the journeys. In 1933, the German psychologist Hedwig von Restorff conducted a series of experiments to try to identify what makes something memorable. She concluded that one of the strongest criteria for recall is individuality. If something stands out for being a different shape, size, colour or in some other way significantly, characteristically different from the other items around it, it becomes easier to recall. For example, in a field of red poppies, a single sunflower becomes memorable; in a roomful of people dressed in black tie, the person in white tie sticks in the mind. The effect works in reality and also in the abstract. So, take the list Lantern, Stirrup, Fish, Clock, Ears, Vase, Johnny Depp, Car, Necklace, Wheelbarrow, Suitcase, Boat, Hammer, Spoon. The item that stands out is Johnny Depp – not because he's famous, but because he's the only person in a list of inanimate objects.

INSIDE MY MIND: STAYING SWITCHED ON

I try to arrange my Journey Method routes so that I walk in and out of buildings. I find that this natural flow to and from buildings keeps my attention, while the stages on the journey are posted both inside and outside to keep things fresh for my memory. The regular changes of atmosphere act like small impulses or nudges that prevent me from losing my concentration or becoming complacent. For example, in my original journey from my front gate around the village where I lived, I find myself moving in and out of shops. When I visit the travel agent, I can “feel” the warm, slightly stuffy air on my face, but as soon as I imagine myself moving outside again, I “feel” fresh air on my face and it sort of wakes me up mentally – just as it might in real life. Again, this is all part of the idea of tricking the brain into believing that what I’m imagining has really happened to me.

The Von Restorff Effect is another reason that the Journey Method is so powerful: every item in the list is made exceptional or unusual in some way by its association with the stages on the journey. Let’s say, for example, that the item “boat” coincides with the stage of my journey represented by the local cenotaph. I imagine a huge war boat (which makes a logical link between the boat and the war memorial) balancing on top of the monument – it’s precariously placed and wobbly, making me anxious that it’s going to topple off. The item “boat” is in this way transformed into something exceptional and, therefore, according to the Von Restorff Effect, more memorable. In short, it doesn’t matter how dull or uniform a list of items appears at first glance – using the Journey Method transforms the items into subjects that are especially easy to memorize.

CHAPTER TWELVE

TOP 5 TIPS FOR CREATING A MEMORY JOURNEY BANK

I think it would be fair to say that I have a compulsive personality. The Journey Method had given me the means by which to memorize a deck of cards just like Creighton Carvello. However, I'd also by then seen Creighton Carvello's name in the *Guinness World Records* book for memorizing six decks of cards. If I could match his single-deck feat, then surely I, too, could memorize six decks or more and get my own name into print. In other words, once I'd created the Journey Method, I clearly wasn't going to rest until I'd beaten Carvello's record. All I needed to do was to increase the number of routes I used so that I could deal with multiple decks. For example, to memorize six decks of shuffled cards I needed six routes each of 52 stages. Easy!

Within three or four hours I'd managed to master routes around three golf courses, two of my childhood houses and the town of Hastings in East Sussex, where I once worked. (Incidentally, if you're not a golfer, you may have been wondering how three golf courses can be distinctive enough to provide good routes for memorization. I don't really have an explanation for that, except to say that if you *are* a golfer, you'll understand! Each course has its idiosyncratic stops and undulations, and if you play them enough – as I confess I once did – each is wonderfully unique.) I used these routes to memorize six decks of cards – with no errors.

My repeated attempts to refine the system with the goal of getting into the record books, apart from proving to myself that I could be the best, made me realize that in order to achieve great feats of memorization I needed to have a

bank of journeys that I could draw upon at will. Over the years I've not only refined and perfected the Journey Method, I've also added to the bank of journeys I use. At first, while I was developing the system and then during the years when I competed at the World Memory Championships, I added several new routes a year, but since I took a break from competition, I've added maybe one 52-stage route annually. Now, I have a collection of 70 routes each of 52 stages that I use again and again. Some I reserve exclusively to tag together to memorize massive amounts of data in competitions; some I save for specific tasks, such as to memorize a to-do list, or the key points of a presentation.

To give you an idea of the sorts of locations I choose, my top 20 routes – that is, the routes that I know best and that have proved most successful for memorization – comprise three golf courses, six houses, five hotels, three towns, two schools and a church. These are all places that I know really well and they already have a memory footprint in my mind. I number them from one to 20 and if I need to use more than one of them for a particular memorization, I always use them in the same order, from one to 20. There are no hard-and-fast rules for deciding which locations will make your best memory journeys – choosing the journeys you'll use to store information is entirely a personal matter, but I do have some top tips that I hope will help to make your own memory journey bank a truly successful one.

INSIDE MY MIND: MAKING THE RECORD BOOKS

Even once I had my bank of journeys, getting my name into print didn't happen overnight. My first attempt to make the record books was in 1988, when I memorized six decks shuffled into each other with only a single sighting of each card. I made no errors ... but then later that year fellow Brit Jonathan Hancock topped me by memorizing seven decks.

More determined than ever, on June 11, 1989, I memorized 25 decks with four errors, but even that wasn't enough. And then, finally, on July 22, 1990, I did it. I memorized 35 decks of cards with only two errors and entered the Guinness World Records book (1991 edition).

I can remember being on holiday and rushing into a shop to buy a copy of the book on its launch day. My excitement was at an all-time high. This was going to change my life! More important, though, was that seeing my name in print confirmed in my own mind that perhaps I wasn't as empty-headed as I'd always been told I was at school. With self-confidence and determination, perhaps there was nothing that my memory couldn't achieve.

Today, although that original record has been broken, I've had several other entries in Guinness. My journeys are so much second nature to me now that not only have I made the record books for numbers of cards memorized, but also for the speed of my memorizations. In 1996, on the UK show Recordbreakers, I memorized a single deck in just 38.29 seconds and, in fact, I hold the current world record for number of cards memorized: 54 decks, following a single sighting of each card, with only eight errors, which I achieved in May 2002.

1 Choose routes that you know inside out

Apart from enabling you to concentrate on the items you need to memorize, rather than on the route of the journey itself, knowing the journey seamlessly is one of the keys to shaving off seconds in the process of memorization (and it's the reason that I've made the record books for speed; see box, opposite). Forest walks I often take with my dog, homes I've lived in, towns and villages I've lived in for years, and so on, all provide me with perfect journey material. I know all my journeys so well – forwards and backwards – that travelling from one stop to the next has become virtually automatic. Instead of mentally watching myself walk step after step along the journey, I appear to travel in a series of snapshots – it's like a slideshow in my mind. However, don't expect this to happen immediately. When you start out, you might need to "walk" your way through your journeys, but eventually you'll be able to zip magically from one place to another – as long as your journeys are second nature to you.

2 Choose routes that have significance for you

This is connected to the first top tip, but it's important enough to warrant a mention of its own. When I start a memorization, I place myself at the first stop on my journey and I take a few seconds to get a sense of where I am. I soak up the atmosphere around me, and I slip back in time to try to recapture the emotions I felt in that place. In effect, I trick my brain into believing that I'm there again, standing at that very place – the more real I can make it, the more likely it is that my memorizations will stick. Journeys that take you to places that have or have had meaning in your life, so that they are rich with emotion and significance, will make the best journeys for successful memorization. Many of my favourite journeys are set within places where I've felt particularly happy.

3 Choose journeys that give good variety

Design your routes so that the stops are varied and interesting and appear in a variety of locations. I often have students who think that a familiar train journey makes a great memory journey. However, they soon find that once they've stopped at three or four stations, the route itself can become complicated to remember – after a while, one train station begins to look like another.

I once set a group of students the challenge of memorizing the main stories on each page of a newspaper. Using their initial routes, the students struggled to recall more than the first three or four headlines – and then I showed them how more interesting journeys would dramatically improve their recall. I was running the course in a castle, which made a fantastic setting for a series of interesting stops – so, taking to our feet, we actually walked a route and memorized as we went along. We discussed the first headline in the lecture room; then we moved to another room with a table that had a chess set laid out on it and there we reviewed page two. In the dining room, I showed everyone photos and stories from the third page. Our journey took us around the castle, into the garden – at each stage reviewing the next page in the newspaper – until finally we came to the car park where we looked at and talked about the last page. When we returned to the lecture room, to everyone's delight, by mentally walking the route the group recalled one or more items of news from every page.

In and out of rooms and buildings, and across paths, rivers and fields, each journey in your bank should have stages that are as distinct from one another as possible. Changes of scenery and transitions between inside and outside keep me alert and focused and stop me becoming complacent about where I am.

4 Choose certain journeys to memorize certain

things

I find that some journeys work better in the memorization of specific things. For example, generally I find journeys based on open spaces are ideal for memorizing speeches and names. To memorize a speech I use the layout of a golf course. It's a personal thing, but I feel less restricted using outside locations for speeches – I have plenty of space to lay down mnemonic images, some of which might be complicated and require several associations in one place (for example, if I have a quotation to memorize). Similarly, I use one of my favourite countryside walks to memorize names, because some names, particularly those with three or four syllables, require me to link together several images (which all have to be stored at one stop) for just that one piece of information. If I have lots of space around each stop in my journey, I have space to place the combination of images without them feeling confined, awkward or illogical.

On the other hand, when I memorize playing cards, I use one image per playing card (or pair of playing cards – more of this later), and I use one image for pairs of numbers (again, we'll come to this). So, for playing cards and numbers, interior settings, where a single image can be attached to a single position, work perfectly well. Of course, such choices are deeply personal – you'll know what works best for you.

5 Choose journeys that give good vantage points

Every time I travel a journey, I see the snapshot of each place from exactly the same vantage point I have always used. For example, when I arrive at the travel agent stop on one of my journeys, I always stand just inside the door looking at the adverts on the wall; when I arrive at the level crossing, I always stand in the middle of it, looking up the road. I peer through the window of the clothes shop – I

never go inside to look out. Consistency in the viewpoints each time I use a particular journey speeds up the process of moving from stage to stage, so it's important that your chosen journeys provide stages that have good, instinctive vantage points, so that you don't find yourself wanting to change them each time you use that route.

CHAPTER THIRTEEN

SPINNING THE MEMORY PLATES

I've talked a lot about the vast number of items I can memorize in a single sitting, and I've probably made it sound as though I do this at a first attempt, without going back at all during the memorization to check what I've already implanted in my brain. However, it's not quite that simple (or superhuman!). When I take part in my record-breaking memory attempts, I recognize that I have a limit beyond which the first items in a memorized sequence can start to become a bit hazy. It's vital, therefore, to have time for review. Knowing when and how many times to review the data you need to remember (whether that's decks of cards or a shopping list or information for a meeting or exam) will make the difference between success and failure in your attempts at recall.

A good analogy is the circus act of plate spinning. The performer spins plates on the ends of upright sticks, one at a time. After about ten or so of these plates have been set up to spin, the first two or three start to wobble. The performer checks these first few plates, gives the sticks a bit of a spin to keep the plates going, and then continues to spin more and more plates until there are 30 or more whirling away at the same time.

When I memorize data, a similar thing happens. I can begin memorizing, say, several decks of cards, sequences of numbers, peoples' names and so on, but at some point – you'll learn what point that is for you simply through trial, error and experience – the ones I memorized at the beginning start to wobble in my head. And that's why, if you want a perfect memory, you have to learn an effective

method of review.

The Rule of Five

If I have a limited amount of time to memorize a large amount of data, I know that I need to be able to review it five times for that information to stick. The more reviews I have, the stronger the retention and the longer I can store the memories, but if time is short, such as during a competition or if I have to memorize a series of names in a room quickly, five reviews is the minimum.

In 2002, I made the record books by memorizing 54 decks of playing cards, shuffled randomly into one another. At some point in my future, I intend to annihilate my own record and memorize a sequence of 100 decks. Someone will shuffle all 5,200 cards into each other and then divide them up again into 100 piles of 52, set face down on a table. I will then attempt to memorize the entire sequence by looking at each card just once. At the end of the memorization, I'll attempt to recall the sequence. According to the strict rules of the *Guinness World Records*, I'm allowed only a half of one-percent margin of error. This means I can make no more than 26 mistakes in total.

This may sound like an impossible challenge, but actually the memorization of each deck of 52 cards is far from impossible. First, I am utterly confident that my system works. I can have 100 well-prepared 52-stage journeys and, using the Journey Method, I know I'll be able to place one card at each stage of a journey, in order, and make it stick until I've used all the journeys and memorized all the cards. (In practice, these days I have a shortcut that enables me to place two cards at each stage, but I want to keep things simple for now, so I'll explain the shortcut later.)

In fact, whether or not I succeed will not really be down to my ability to apply the Journey Method, but instead it will be down to the effectiveness of my review strategy – that is, my application of the Rule of Five.

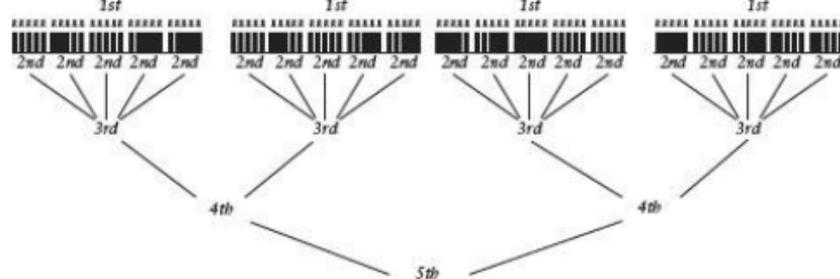
Once I've memorized the first pile of 52 cards (which takes about three minutes), I'll immediately carry out my first review of that sequence. The review takes about 30 seconds. As this is a singlesighting challenge, I won't be able to look again at the cards, so I'll review the cards from memory alone by mentally walking the route again. I'll do the same for the next four piles – memorizing and then reviewing from memory each sequence along its journey.

When I've memorized and reviewed the first five piles, I'll start my second review. For this, I'll review the cards in all five piles from beginning to end. Only once I've done that will I start memorizing the next batch of five piles of cards, again with a first review of each pile of 52, followed by a second review of that entire set of five piles. Once I've memorized 25 piles of cards (a mere quarter of the total!), doing first and second reviews in groups of five, I'll begin my third review – starting at the first card of the first pile and ending with the last card of the 25th pile, in sequence. I'll take my fourth review after I've completed the next 25 piles (each of these undergoing the same process of review as the first 25 piles) – so I'll mentally review all the cards from 50 piles. At this point I should be fairly confident that I can recall the order of the first 2,600 cards without error. In that case I'll repeat the whole exercise all over again for the remaining 50 piles.

Finally, I'll carry out my fifth and final review only after I have memorized all 100 decks. Once I've completed my fifth review, I'll attempt to recall the entire sequence of 5,200 cards, reciting them one by one. I estimate that to recall and recite each of the cards alone will take me approximately six hours.

My Rule of Five system for 100 decks might be easier to follow with the help of this diagram:

REVIEW STRATEGY FOR 100 DECKS OF PLAYING CARDS



1st, 2nd, 3rd, 4th and 5th refer to the stages of review. You review each of the first five decks in turn, separately, immediately after memorizing the cards in each deck. Then after completing your 1st review of the fifth deck, you do your 2nd review of all five decks together. Then you move on to memorize and review the next 5 decks in the same way, and continue doing 1st and 2nd reviews until you have memorized 25 decks. At this point you do a 3rd review of all 25 x 52 cards. Then you follow the same procedure for the next 25 decks, and then do a 4th review ... and so on until your 5th review.

I believe that this pattern of reviewing has been crucial to my winning eight World Memory Championships titles. During competition, entrants are given a certain amount of time for memorizing and then a certain amount of time for recall. I have been in competitions in which as soon as the clock starts for the recall time, most of the competitors immediately begin to scribble down their memorized sequences as fast as they can. They worry that the information will quickly start to fade from their memory. Maybe only two or three competitors, myself included, sit quietly to use this critical time for one final mental review.

Whatever the discipline, whether I have just memorized names and faces, thousands of binary digits or hundreds of words, the first thing I do before attempting to recall anything is carry out an immediate review. I have to confess, though, I don't always review five times – sometimes,

particularly in competition, I just don't have time. Nevertheless, five reviews is the number I believe to be the optimum for perfect memorization, so I try to stick by my Rule of Five as much as I can.

The next time you're at a party and you're introduced to people you've never met before, or your partner rattles through a list of items you need to buy at the store, or your boss gives you a spoken list of instructions, try using the principles of the Rule of Five. As soon as you've been given the pieces of information (names, items or instructions), repeat the complete list to yourself in your head (if you're memorizing names, you might be able to repeat them back aloud to the appropriate people). If you've been given a shopping list or instructions, don't be tempted to hurry off and write anything down, simply make an immediate review in your mind. Then, a few minutes later make another mental review – all the time remaining calm. You may need to review only once or twice – the number of reviews will differ according to the amount of information you need to memorize. The important thing is the immediacy of the reviews. If, instead of reviewing straightaway, you waited as you frantically tried to find a pen and paper to write down the information, you'd have wasted precious time (if you can't recall it immediately, then it's unlikely you'll recall it once you've found a pen and paper). If you review straightaway, there's no slippage because no time is lost before you embed the information in your memory.

INSIDE MY MIND: SPOTTING THE COMPETITION

In 1998, at the German Memory Championships, the bell sounded for the recall phase of the various disciplines and, each time, most people frantically began to write. However, I spotted one competitor who sat quietly with his eyes closed. Whether the discipline involved cards, numbers or words, he was obviously reviewing his memorization one final time. At that moment I knew this man was a threat – if he was practising a review strategy, he could strip me of my World Championship crown. His name was Dr Gunther Karsten, and not only did he go on to win the German Championships eight times, he finally secured the World title in 2007. He, too, uses the Journey Method – and he practises the art of review – although to what extent, I may never know!

CHAPTER FOURTEEN

FROM CARDS TO NUMBERS

Soon after I'd mastered the art of card memorization, I wondered if I could transfer this skill to memorizing long sequences of numbers. Our lives are governed by numbers. Telephone numbers, transport timetables, weights and measures, population statistics, election results, PINs, entry codes and numerical passwords – to name a few. Even if you don't want to attempt the numerical challenges I encounter during competitions, everything has to be quantified, tallied, reckoned, and made secure – so being able to memorize numbers counts!

Psychologists have determined that, on average, the human brain can retain around only seven to nine pieces of data in its short-term (working) memory. This assessment may be accurate, but it's certainly not insuperable. Using my memory systems, I've shown that it's possible to memorize far more than nine digits (in fact, I've memorized well into the hundreds!) at a time, as long as you have a strategy for doing it.

Some people, mathematicians mostly, see real beauty in numbers. I'm sad to say that as I was growing up I wasn't one of these enlightened folk. Until I started to perform feats of memorization, sequences of numbers to me seemed unintelligible and instantly forgettable. However, *now* when I look at a series of numbers, they appear completely differently to me. They come to life; they are animated, colourful and even at times humorous. Now, numbers have characters all of their own. Why? Because I have developed a way to convert them from (to me at least) their normal, dull, meaningless form into something that my brain can work with.

The secret to memorizing numbers is to attach significance to them by translating them into coded images. This lies at the heart of a strategy I call my “language of numbers”.

However, there are several simpler systems that people use, so I want to start by teaching you these. For short number sequences, such as memorizing a PIN, they come in pretty handy.

Number–shapes

Have you ever looked at the shape of the number “2” and thought that it resembles a swan? Or at “4” and seen the sail of a boat or perhaps a flag on a pole? The number–shape system works on the principle that we can translate any number into an image according to its unique ~~form~~. As a quick experiment, using a pen and paper, write down the first image that enters your mind as you think of each number from zero to nine. Write down the numbers first, if it helps you. Compare your ideas with mine, which appear in the box on the opposite page (but remember that your own associations will always be stronger for you). I’ve included drawings of some of the associations to make it clearer how the system works.



0 = FOOTBALL,
RING OR WHEEL



1 = PENCIL,
STREETLAMP OR
CANDLE



2 = SWAN OR
SNAKE



3 = LIPS OR
HANDCUFFS



4 = SAIL OR
FLAG



5 = SNAKE OR
SEAHORSE



6 = GOLF CLUB,
ELEPHANT'S TRUNK OR
MONOCLE



7 = BOOMERANG
OR AXE



8 = SNOWMAN
OR EGG TIMER



9 = BALLOON AND STRING
OR LASSO

As there are only ten digits to translate to images, this is a very simple code to learn. Once you're able to see a

number as an object, you can use the object codes to memorize short sequences of numbers by using the objects as elements of a story.

For example, take the number 1 7 9 2, which was the number of steps in the Eiffel Tower when it first opened. Using my number– shape associations, you might picture yourself in Paris at night time, holding a candle (the number–shape for one). Carrying the candle, you head toward the Eiffel Tower. At the entrance you notice a man chopping away at one of the steel legs, using an axe (the number–shape for seven). The futility of this activity makes it all the more memorable. You begin your ascent of the tower steps. When you reach the top, someone hands you a balloon on a string (the number–shape for nine). Give the balloon a colour to make it more memorable – mine is red. As you gaze across Paris, the full moon glows in the night sky and you see the silhouette of a swan – which gives you your number–shape for two – fly across the moon’s face.

Anchoring your story to a location that’s relevant to the number you’re trying to remember is another important aide-mémoire. If you needed to remember your credit card or debit account PIN, a short route around your local bank or from your house to the bank would be perfect.

Number–rhymes

If number–shapes don’t appeal to you, you could try number– rhymes. This time the image you form to represent the number rhymes with the number sound. So, for one you could have bun, for two, shoe, and so on. Again, create the rhymes that are most natural to you, but I imagine they’ll be quite similar to mine:

0 = HERO, NERO (THE ROMAN EMPEROR)

1 = BUN, SUN

2 = SHOE, GLUE

3 = TREE, SEA

- 4 = DOOR, BOAR
- 5 = HIVE, CHIVE
- 6 = STICKS, BRICKS
- 7 = HEAVEN (OR PERHAPS KEVIN, IF YOU'VE GOT A FRIEND WITH THAT NAME)
- 8 = GATE, WEIGHT
- 9 = WINE, PINE

Let's say you're visiting a friend without your car. Your friend tells you that you need to catch the number 839 bus, which stops right outside her house. How could you use the number-rhyme system to remember which bus to catch? Imagine that the bus pulls up at the bus stop. To get on it, you have to open a gate (eight). The first person you see on the bus, sitting in the front row of seats, is holding a small tree (three) in a tub on her lap, as you pass her you notice that the tree is a pine (nine) – perhaps it has Christmas decorations on it to make the pine-tree image more vivid. If you review the scene a couple of times, you won't forget which bus you're supposed to be on.

Quick, easy and practical for short sequences of numbers, number-shapes and number-rhymes find their way into my everyday memorizations all the time. However, these systems are not developed enough to help me in World Memory Championships, so I've had to devise my own.

Memorizing pi

Creighton Carvello, who had inspired me to memorize cards in the first place, had managed to memorize pi (the area of a circle, divided by the square of its radius) to 20,013 decimal places. Pi is an infinite number which, as far as we know, doesn't repeat itself. Consequently, it makes for an excellent measure of a person's memory capacity. It won't surprise you to know then, that pi was the next challenge I set for myself.

Over the years, my experimentation with memory techniques has taught me several things about the best way to make information stick, one of them being that letters are easier to turn into usable codes than numbers.

In the early days of my experimentation, I set about coding numbers in exactly the same way as I had coded playing cards: by turning them into letters and then into images. I developed a system for memorizing groups of five numbers, each as a single image. So how does this work for memorizing the decimal places of pi? The first 30 decimal places of pi look like this:

[3.]141592653589793238462643383279

As I studied the first 15 digits, I decided to give each number a specific letter, and to use the letters to form a word or words that I could string into a story. To improve my chances of being able to create a usable sequence of letters, I wrote out the alphabet to U and assigned each number two possible letter codes by running out one to nine twice and then giving 0 the options of S, T and U.

The whole thing looked like this:

A B C D E F G H I
1 2 3 4 5 6 7 8 9

J K L M N O P Q
1 2 3 4 5 6 7 8

R S T U
9 0 0 0

So, 1 = A, the first letter of the alphabet, but also J, which is the tenth letter of the alphabet; 2 = B or K; and so on.

Using these number-letter codes 14159 became AMANI, 26535 translated became BONCE, and 89793

translated became HIPIL. If a particular word didn't make sense, then I would break the word down into smaller syllables and therefore more images. For AMANI, I imagined an Indian man (a man I); for BONCE, I imagined a head (bonce being a colloquial word for head, of course), and for HIPIL I pictured a hip with a disease: a hip ill. So far so good, until I looked at the next 15 digits complete with their codes:

23846 26433 83279
BLQDO BOMCC QCBPI

These letter sets required quite a bit of creative thinking before I could form some sort of image. So, BLQDO became a block of wood (BLQ) balanced on my own head (DO = Dominic); BOMCC became a bomb (BOM) on a motorbike (CC, as in the engine power of a motorbike) and QCBPI became a barrister (QC) handing a BP (British Petroleum) sign to an Indian man (I). (The images were complicated to come up with, but the best I could think of at the time.)

To remember the numbers in sequence, I created an extended journey from my house leading through the village, the church and its graveyard, over a hill and then into town. I attached the images of each set of five numbers to a stage in the journey, until (with some persistence) I'd laid down a route of 820 stages in a continuous, unbroken journey, each stage representing five numbers of pi. The result was that I could recite pi to 4,100 decimal places.

This was still a long way off Carvello's record, but I could see that, if I persevered, his achievement would be within reach. However, as a task, converting and memorizing pi proved so arduous that I decided to abandon the project and instead worked on refining the number system itself.

Creating a language for numbers

I wanted a system that would allow me to look at numbers and form images almost instantaneously, as if I were reading sentences from a book.

The approach of creating images had worked with playing cards, so why not with numbers, too? And then I realized where my number memorizations had so far been going wrong. Groups of five numbers were too complicated – instead, I should be grouping the numbers into only pairs. As it turned out, as frustrating as learning those few thousand places of pi had been, I'd paved the way for a system that eventually was to help me secure eight World Memory Championships titles – I called it the “Dominic System”.

INSIDE MY MIND: TAKING THE POSITIVES

On reflection, it's tempting to think my dalliance with pi had been a complete waste of time. However, although I had lost a couple of weeks memorizing all those numbers, I had gained much from the experience. I realized that there really was no limit to what and how much I could remember, as long as I could find enough places in the world to use as mental storage space. I also learned that the speed with which I could memorize those numbers depended upon the efficiency of the system I used and how much I practised using it.

CHAPTER FIFTEEN

THE DOMINIC SYSTEM

The Dominic System works by assigning a specific letter to each number from zero to nine and then grouping the number-letters in a sequence into pairs. The system is a refinement of the first technique I came up with (to memorize pi), because it simplifies the codes – there’s only one possible letter code per number. So:

1 = A 6 = S

2 = B 7 = G

3 = C 8 = H

4 = D 9 = N

5 = E 0 = O

One to five take the letters A to E – the first five letters of the alphabet. Originally, I decided to give all the numbers their corresponding letter of the alphabet – this seemed the most logical approach. However, it wasn’t actually the most natural formula for me, so I went with my instinct instead.

I coded six as the letter S, because of its sound. I gave seven the letter G because of the G7 configuration of world finance ministers. Eight takes H for its similar sound, and similarly nine takes N. Zero is coded with the letter O, because of its shape.

Using my new codes and following my realization that pairs of letters were more usable than longer strings of letters, the first 24 places of pi now looked like this:

14 15 92 65 35 89

AD AE NB SE CE HN

I knew from my experiences with memorizing playing cards that people (compared with objects) gave me the most reliable images to work with. So, the pairs of letters gave me triggers for names – sometimes the letters represented initials, sometimes they reminded me of shortenings of people’s full names. Either way, I could easily translate each pair of numbers into a single person.

The people I chose to represent each pairing were people who had particular significance for me – sometimes because I knew them, sometimes because they were famous (or infamous!). When I scanned the pairs, certain names occurred to me in a flash.

For example, I knew a man at my golf club called Addie – AD (14) immediately makes me think of him. NB (92) makes me think of someone I know called Nobby. I think of my sister-in-law, Henny, when I see HN (89). Filling in a few letters I get Gene for GN (79), Desmond for DS (46) and Dick for DC (43).

For the rest of the numbers I have to use initials: AE (15) gives me Albert Einstein; SE (65) becomes the singer Sheena Easton; and CE (35) are the initials of the actor Clint Eastwood.

Think of a number, any number

There are 100 combinations of number pairings (00, 01, 02 ... all the way up to 97, 98, 99). In order to be able to apply the Dominic System quickly to any sequence of numbers, I needed to have already banked people codes for every pairing. This meant that I needed to dedicate a bit of time to devise a list of 100 characters – one for each possible pair. I’ll use my own examples throughout this book, but to be confident about your own memorizations, you may need to

write a list of your own number–people codes.

Props, features and actions

I find that my memorizations stick better when each assigned character has a prop, feature or action, too. This helps to cement the character in my mind. For example, I picture Addie (AD/14) swinging a golf club; my sister-in-law Henry (HN/89) is an artist, so I picture her holding a paint brush; and the singer Sheena Easton (SE/65) clutches a microphone.

Putting it all together

Once you're familiar with your cast of characters and are proficient at converting pairs of numbers into them, you can use the Journey Method to memorize long numerical sequences.

Using the layout of a home, this is how you can start to memorize the decimal places of pi. I've started you off below with the first ten decimal places, but how many you get to is limited really only by the length of your journey. If, like me, you can join several journeys together (I often use journeys of 50 stages, in a similar way to the way I memorize cards), then you can easily work into the thousands (remembering that each stop "holds" the codes for two numbers in the sequence). Here's how it works:

STAGE 1 **Front door** AD 14
STAGE 2 **Kitchen** AE 15
STAGE 3 **Utility room** NB 92
STAGE 4 **Living room** SE 65
STAGE 5 **Stairs** CE 35

At the front door of my house, I picture Addie (AD/14) standing in the doorway swinging his golf club. I shuffle past

Addie, trying to avoid his swing and enter the kitchen, where I see Albert Einstein (AE/15) scribbling a formula on my noticeboard. In the utility room is Nobby (NB/92), and he's strumming the guitar he plays, but he's getting agitated because there's different music coming from the living room. I go in there to see Sheena Easton (SE/65) singing into her microphone. I leave the living room and move to go up the stairs, but on the bottom step is Clint Eastwood, chewing on a cigar and saying "Go ahead. Make my day!"

If I run through these scenes just once more, I know that I have memorized the first ten decimal places of pi. What's more, I can repeat the number backwards as well as forwards by simply reversing the journey through my house and the initials of the person at each stage. (Note that for such a short sequence, it's probably not necessary to apply the Rule of Five; see [pp.76–80.](#))

Now that you know how the Dominic System works, try the exercise on the following pages.

EXERCISE 7: Twenty Numbers

In this exercise the characters and ten-stage journey are up to you. You have 5 minutes for the memorization itself (step 4). Use the questions in step 5 to test the efficacy of your own characters.

- 1 On a sheet of paper write the numbers 0 to 9. Next to each number designate a letter that makes a logical code for you.
- 2 Now, look at this 20-digit number:

5 6 6 4 9 2 8 8 2 7 5 3 1 2 2 0 1 5 3 5

Without altering the order of the numbers, split the digits up into pairs, then write each pair down the left-hand

side of a sheet of paper.

- 3 Next to each pair of numbers, make a new column of corresponding letter codes. In a third column give each pair of letter codes its character (using the letters either as initials or because they remind you of a particular name). In a final column, write down each character's action, feature or prop.
- 4 In your mind's eye, walk yourself through your ten-stop journey. At the first stop, imagine the first character on your list. Don't forget to use their prop, feature or action, too, and add in sensory detail and emotions. Continue to make the mini-movie in your mind, until you have been to all the stops and imagined all the characters. Once you've finished, do a single review of the characters on the journey – do this from memory, without referring back to the list of characters.
- 5 Now see how many of these questions you can answer (the more you get right, the more efficient your codes). Note your answers down on a sheet of paper and then refer back to the original sequence to see if you got them all right.

- What is the seventh number in the sequence?
- Which two numbers follow 2 7?
- What are the first six numbers?
- What are the last four numbers?
- How many numbers are there before the first number 3?
- Which two numbers come before the sequence 1 5?
- What is the 13th number in the sequence?
- What are the 11th, 17th and 19th numbers in the sequence?
- Can you note down every third number in the

sequence?

- Can you note down the whole sequence in reverse?
(Don't worry if you can't – it's your first attempt, after all!)

If you didn't manage to answer all the questions correctly, don't worry. Try the journey again, but attempt to memorize only the first ten numbers in the sequence. Test yourself by writing down the sequence on a sheet of paper. Once you can recall the first ten accurately, try memorizing all 20 again, testing yourself with the questions.

CHAPTER SIXTEEN

DOUBLE PAIRS AND COMPLEX IMAGES

In the last exercise you turned ten pairs of numbers into characters. As I mentioned on [page 92](#), to use the Dominic System quickly, it's best to have converted all 100 possible pairs – and I don't deny that this takes a significant degree of commitment. Learning the entire cast of 100 characters and their associated actions, features and props so that you connect a pair of numbers to a character almost instantly – it's like becoming fluent in a new language – is hugely time-consuming. However, once you've learned this new language, not only can it be put to practical use on a day-to-day basis, but the learning process itself will exercise your brain, improve your levels of concentration and sharpen your memory.

There are ten disciplines at the World Memory Championships. In various guises they involve memorizing numbers, binary digits, playing cards, names and faces, dates, words, and images (see box, opposite, for a full breakdown). One of the most taxing heats is the one-hour Spoken Number round. In this, competitors are required to memorize as many numbers as possible in one hour, which they then must recall in the correct sequence. When I first entered the Championships, I used the method I've just taught you – placing one person (two digits) on each stage of my journey. This system enabled me to memorize 1,000 digits in one hour – and I used it to win the first few Championships. However, as more people took up the sport of memory, not only did the sheer number of competitors increase year after year, but so did their calibre. I realized that I would need to improve on the efficiency of

the Dominic System if I were to keep my competitive edge.