Boost your memory – and sharpen your mind

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1.1 The importance of memory

Just as time management is vital to the effectiveness of managers, administrators, students, and others, so the management of memory and recall is equally vital to our personal productivity and success. Time wasters such as forgetting vital information at a meeting, having to constantly refer to the same memo or email and having important assignments slip through the cracks can be just as counterproductive as constant interruptions, rush jobs, or changing priorities.

Organizing your thoughts is just as important as organizing your desk. Just as searching your desk and files for lost information can waste an hour or more per day, so can searching your memory for data you thought would be on the tip of your tongue. You must manage mental time as well as external time.

How important is memory? How about this headline from the May 23, 2011 edition of the Toronto Star newspaper: "Toddler dies after being forgotten in hot car." The reason suggested by the wife of the father who had forgotten to drop off the child at day care on the way to work: "He was distracted while juggling many responsibilities." And I have read of at least a half-dozen other similar cases in the past few years.

Working memory (short-term memory) is critical for keeping information in the mind until you are ready to do something with it. But the brain can only juggle so much information without losing some of it. The prefrontal cortex has its limitations. As David Rock, author of *Your brain at work* expresses it, "If the processing resources for holding thoughts in mind were equivalent to the value of the coins in your pocket right now, the processing power of the rest of the brain would be roughly equivalent to the entire U.S. economy."

Studies of pilot errors in fatal airline crashes indicate that problems are rarely due to the pilot not knowing what to do or when do it, but more often due to failures in resuming a task after being interrupted. This is an example of weak working memory.

Thankfully, the results of forgetting are not all tragic. But one scientist, Dr. Zach Hambrick of Michigan State, believes that an individual's working memory is the deciding factor in determining whether a person is good or great. He found that those with greater working memory capacity outperformed those with lower levels – including those with extensive experience and knowledge of the task being performed.

Dr. Hambrick is not the only scientist who thinks there is a link between working memory and general cognitive performance. Some researchers believe it is at the very root of intelligence. Strengthening your working memory ability is important, and neuroscientists feel that it can be strengthened. An article in the May 5, 2011 *Toronto Globe and Mail* titled "The brain can juggle only so much" by Mark Fenske, co-author of *The winner's brain*, claims that practice can improve working memory. He illustrated this by using a computer-based task that requires information to be held in mind while updating it or comparing it to newly presented information. Not only did those involved in the training improve in working memory, but also in concentration and reasoning ability.

Multitasking puts a strain on working memory since it requires you to bring back important pieces of information for each task as you switch back and forth between them. If you do have to switch tasks suddenly, such as attending to an important interruption, take a few seconds to jot down what still needs to be done before moving to the new task.

1.2 Things you don't need to remember

You have probably seen memory experts dazzle everyone with their phenomenal power of recall. They give you all the names and telephone numbers in the Manhattan telephone directory and name the presidents of the United States in order, complete with their birthdates and shoe sizes. They could recite Webster's dictionary from A–Z and repeat the names of a hundred people after meeting them only once.

And so could you, if you put the same amount of effort and zeal into learning and applying their techniques. But who really wants to know the shoe sizes of the presidents and how often would you have to refer to the Manhattan telephone directory? The amount of effort you would have to put into memorizing that stuff certainly wouldn't be worth it when you consider how often you would need the information. It's simply not time-effective. It's faster to look up the information online when and if you ever need it.

The trouble is that if we don't exercise our brain, and in particular the prefrontal cortex where working memory resides (along with other executive skills such as planning and organizing), working memory will get worse rather than better.

I used to take one area of self-development per year and study it in depth. One such area, about 35 years ago was memory. And I discovered that anyone could become a so-called memory expert if they really applied themselves to the task. After a year or so of extensive training I was able to memorize a deck of cards as they were turned one at a time, recite one hundred 4-digit numbers in any order, recall names of 50 people attending my seminars after meeting them only once, and participate in all kinds of entertaining feats. I even conducted my own workshops on memory training and wrote a book called *Manage your Memory*.

That was over 35 years ago. I find now that memory systems will only work if *you* do. Nothing comes without effort. And you don't need a lot of systems or gimmicks if you simply apply the old fashioned AIR formula. Attention – Interest – and Repetition. The memory techniques and gimmicks all worked because I was forced to get totally involved in the memorizing process. I had to really pay attention, and repeatedly work at perfecting the techniques, and I was certainly interested in improving my memory.

It's not necessary to memorize a hundred 4-digit numbers or dazzle your associates with feats of wonder – unless you are a performer or want to be a memory expert. It's sufficient to be able to memorize someone's name after being introduced and remember basic information such as where people live and where they work, the names of their children etc. And where you put your spare set of glasses and so on – everyday things such as rehearsing speeches and information for exams and things to do and errands to run. And most of this can be accomplished simply by improving our receptive skills such as observation, listening, attention and concentration. Don't underestimate the importance of listening. All the books and seminars promoting weird, visual images as the way to recall information, are all for naught if you don't hear the information in the first place.

My aim in this book is not to make you into a memory expert, but simply to provide you with enough information and memory techniques to enable you to excel at memorization and recall – and to keep your brain healthy in the process.

1.3 Why your memory may seem faulty

Some of us have very poor powers of observation. We're uninvolved, passive, and inattentive. We could be short-changed in a store and not even notice it. We could glance at our watch and still not be able to tell someone the time. Some of us wouldn't be able to direct someone to the nearest service station or tell someone where a coffee shop in our neighborhood was – even though we had passed these places hundreds of times.

Have you ever been at a party and by the time you're introduced to the second person, you've forgotten the name of the first person you met? Have you ever dialed a number and before they answer you had forgotten who you were calling? Have you ever waited for a chance to interject something into a conversation and by the time you do, you have forgotten what you were going to say? This is an indication of weak working memory skills, and you may be victim of what memory expert Hermine Hilton calls the *Seven-Second Syndrome*. When a person fails to "lock in" new information, it can be lost in as little as 7 seconds. A good memory is when you can recall things accurately at will. But don't expect to recall something you never really paid attention to. Not being able to recall something may not be a case of bad memory. It may simply not have been transferred to your long-term memory in the first place. Through faulty listening, preoccupation or distraction it may never have registered in your brain.

Many of us are poor listeners. Some of us have a problem hearing things in the first place. We forget 75% of what we *do* hear within two months. We forget between a third and a half of what we hear within 8 hours. If someone is not observant, a poor listener, fails to concentrate, and lacks interest in the topic in question, he or she has little chance of remembering much a few weeks later. And this is exacerbated by the digital age of speed where everything seems to be happening at once, and where people seem to take pride in the self-defeating behavior of multitasking.

Let's use names as an example. Many people have trouble with names. Not faces. You don't hear people saying "Your name is familiar but I can't recall your face". The most important thing is to *listen* carefully to the name when you are first introduced. Then *immediately* say the name aloud. "Glad to meet you *John*." Repeating the name aloud right away is very important. In fact you should say the name to yourself several times while you're with the person. At the end of the conversation, repeat the name aloud. "Hope to see you again, *John*." According to the book, *You Can have a Near-Perfect Memory*, by Mort Herold, researchers have found that people remember names about 30 percent better when they repeat the other person's name at the time of introduction.

As soon as you're able to, enter the information in your smartphone or on an index card. The act of writing things down also helps to get them into your long-term memory – as does reviewing them periodically.

2 Our wonderful world of memory

2.1 How our memory works.

A simple way of explaining it is that we possess two separate memory systems – short-term memory or working memory, and long-term memory. Paying attention and hearing the information properly is usually enough to get it into our short-term memory, and we have no trouble repeating a name when we are first introduced. But unless we make a conscious effort to transfer it to long-term storage, the memory of it soon disappears. That's why I suggest you repeat the name out loud during introductions, say it silently to yourself several times, and write it down and review it later.

Now assuming you get the information into long term storage you may still have a problem *recalling* the information at a later date. Just how much of a problem depends on how effectively we memorized the information in the first place and how many handles we have provided in order to pull the information out of our memory bank. The more you know about a person you meet, the more handles you provide. Our mind works through *association*. The more things you associate with the person's name, such as the name of his wife, where he works, the type of food he likes, his hobbies, education etc. etc., the more handles you provide. Later when you're trying to recall the person's name you can think about the place you met, who introduced you, and the dozen other things that are all connected to his name, and eventually one of these facts will stimulate the recall of his name from long-term memory. *Two things experienced together will become associated with each other in our mind.*

Perhaps this may be a generalization, but I think women have a better memory for names then men for this reason. They seem to be more genuinely interested in other people. I know when I talk to someone, I don't ask many questions. I talk about the weather and sports and news stories, but little about the personal life of the individual. But if you had left my wife with someone for five minutes she would know the person's background, family situation, likes, and dislikes and what she had for dinner the night before.

According to Elaine Biech, author of *Training for dummies*, about 70% of Western culture is a visual-learning culture. This means that while you should involve as many senses as possible when learning new material, the emphasis should be on the visual. You are a big part of the learning process, so don't simply sit and absorb. Your enthusiasm and physical movement also contribute to the learning process.

Learning that takes place through the senses, according to Biech's book, is; taste, 1%, touch, 1.5%, scent, 3.5%, aural, 11% and visual, 83%. Research conducted by 3M showed that we process visuals 60,000 times faster than text. Our brain can detect images simultaneously but language and text are decoded in a linear, sequential way – taking more time to process. Our brains are wired to respond differently to visuals than to text.

We tend to be good at forgetting non-essentials and instead remember the information we think about often or that has emotional significance to us. According to Ernest Hartmann, professor of psychiatry at Tufts University School of Medicine at Newton-Wellesley Hospital, mulling over important thoughts activates our dorsolateral prefrontal cortex, a brain region that facilitates memory. The more impressive, vivid and emotional your thought, the more likely you are to remember it.

The above fact will be used when I cover the association method that can be used to remember almost everything. The more you participate physically, mentally and emotionally while memorizing, the easier you will be able to recall the information later. A brain scan study reported in the journal *Nature Neuroscience* showed that even making gestures as you're listening heightens activity in the brain's memory center, activating other cells that wouldn't normally be involved. It was found that even touching your ear or chin as you learn a new phone number and then touching it again when trying to recall it will activate the additional neural circuits that give you an advantage in recall.

When you recall an event again and again, the first recall will be the most accurate one. It's more like putting a puzzle together rather than replaying a video. Memories are rebuilt every time that they are accessed and influenced by more recent experiences.

After the 9/11 attacks, for example, psychologists surveyed several hundred subjects about their memories of that day. They then repeated the surveys of the same people one year later. 37% of the details had changed. By 2004, that number was 50%. They had no idea their memories had changed that much.

2.2 What is working memory?

Working memory is the ability to hold information in memory for short periods of time, 35 to 40 seconds, while performing complex tasks such as language comprehension, learning and reasoning. In the middle of a hectic day when you're going from one crisis to another and you still remember that you were supposed to phone someone at a specific time, you have a strong working memory. Or if you're interrupted by a phone call and you don't forget where you left off once the call is finished. But if you are absent-minded, need frequent reminders about things you said you would do, or forget your smartphone at the coffee shop, you may have weak working memory skills.

As expressed by scientist Barry Gibb in his book *The rough guide to the brain*, without long-term memory, you wouldn't know who you are or where you are or who you know. Without short-term or memory working memory, by the time you got to the end of this paragraph you would have forgotten anything I had written in the previous paragraph.

Working memory is one of about 12 executive skills that have been identified and studied by neurologists. Sometimes referred to as "habits of the mind," a person's "executive skills" are those brain-based skills required to execute tasks – such things as getting organized, planning, managing time, initiating work, staying on task, controlling impulses, regulating emotions, and being adaptable and resilient. These skills primarily reside in the prefrontal cortex, that part of the brain that helps you manage complex problems, goals and self-control.

If a child had weak executive skills they would probably be diagnosed as having ADHD, and many researchers believe that ADD and ADHD are disorders of executive skills. All agree that if the child has ADHD at least *some* executive skills will be impaired, such as the ability to pay attention and stay focused, manage their time, and stick to one task for any length of time.

Memory experts refer to working memory as short-term memory. If you are not able to transfer information from your short-term memory to your long-term memory, you won't be able to recall it later. And with weak working memory skills, this is extremely difficult.

2.3 Is your working memory getting weaker?

It's evident that if we don't use our executive skills, including working memory, they will weaken. It's similar to the impact of a sedentary lifestyle on our muscles. But not only are we outsourcing our memories to computers, and doing it willingly, some people seem to be advocating it. The personal technology columnist for the *New York Times* in the August, 2013 issue of *Scientific American*, asks "why should we mourn the loss of memorization skills any more than we pine for hot type technology, Morse code abilities or a knack for operating elevators?" Well, by letting computers do all our memorizing and dozens of other mental activities, we are weakening our brains. I think that merits a little mourning.

I'm not against progress. Computers in the classroom? By all means. Let them take over the routine work? Absolutely. Program them to do those time wasting jobs, including calculations? Of course. But not to the extent that they eliminate the need, ability or desire to memorize, calculate, problem solve, create, think and otherwise exercise our brains. Heaven forbid if some quirk of nature should short-circuit the world's computers. We would all be as helpless as newborn babies.

Smartphones and iPhones have apps for everything. You are reminded to turn off the stove, when to leave for an appointment and where you left the car. Memorization seems to be a dying skill; because everything is available at the click of a mouse or a tap of an icon. Unfortunately, as our natural memory declines, we will have a greater chance of forgetting our smartphone somewhere – and we will be helpless without it. The problem with our brain, and with memory and with all the other cognitive skills, is that if we don't use it we lose it.

2.4 What is long-term memory?

Once you convince your brain that a piece of information is important to you, it is transferred to long-term memory so you will be able to access it in the future. Whereas the prefrontal cortex is that part of the brain where short-term or working memory resides, it is mainly the hippocampus that consolidates it into long-tern status – although many parts of the brain are actually involved in the process of storage and retrieval of memories. This process is thought to occur during sleep.

The older you are the more information you have stashed away in long-term memory. But don't worry about it overflowing. If your brain were a digital video recorder capturing TV shows for you, you would have to leave the TV running continuously for more than 300 years to use up all the storage. Or as Jesse Payne expressed in in his book, *Change your brain change your life before 25,* the brain is estimated to hold the equivalent of about six million years' worth of the Wall Street Journal.

3 The care and feeding of memory

3.1 Exercise your body & your brain

The best thing for strengthening your memory, both working memory and long-term memory, as well as all your cognitive skills, is to continually exercise both your body and your brain. Do crossword puzzles or sudoku, read articles and books, take educational courses, practice creativity exercises, and continually challenge yourself. If you retire physically, don't retire mentally. Studies suggest that maintaining intellectual activity throughout life can preserve memory in later years.

The *Victoria Longitudinal Study* in Western Canada revealed that middle-aged or older individuals, who participate in intellectually challenging activities and projects, including reading, are less likely to suffer declines in cognitive functioning.

The process of memorizing described in this book is mental exercise, not only for improving your power of recall, but for strengthening all your cognitive skills. But physical exercise is even more important. You need to keep the blood flowing to the brain with the oxygen and glucose that it needs in order to operate at its peak. The brain may be only 2% of the weight of the body, but it consumes up to 25% overall glucose and blood circulation.

The benefits of physical activity was highlighted when researchers in Australia published results of trials conducted with 170 older adults who had started showing memory problems and had increased risk of developing dementia. The participants averaged an extra 29 minutes a day of physical activity over six months. The experimental group scored better on tests of their cognition than the control group and was twice as great as the one that had previously been shown with the drug Aricept, which is currently being used to slow the progression of Alzheimer's disease. And the improvement lasted for 12 months after the exercise program ended. The explanation is that exercising the heart somehow stimulates growth factors to produce more new nerve cells in the hippocampus, one of the key centers in the brain for memory and learning.

Shrinking of the hippocampus, a brain area involved in memory formation does not have to happen with age as once thought. Engaging in moderate aerobic exercise will not only prevent shrinkage, but will reverse shrinkage within one year. Older people who walked 40 minutes a day, three times a week, increased the size of their hippocampus about 2% more than when they started exercising. They also did better on memory tests. John Medina, in his book, *Brain rules*, indicates that the risk of Alzheimer's disease is reduced by more than 60 percent with regular exercise.

Learning another language is one of the best therapies for the brain. Evidence suggests that it can delay the onset of Alzheimer's by about five years. Continuing research also is showing that music stimulates the prefrontal cortex and executive skills are enhanced through singing. Seniors who had been professional musicians showed more rapid mental processing than others. An article in the September, 2014 issue of the *Reader's Digest* (*A new way of thinking* by Philip Preille) describes an ongoing study of retirement home residents around Toronto, Canada that is indicating significant improvement in executive skills when they participate in choirs. This improvement includes better word recall, attention span and self-control.

3.2 Watch that stress

Stress can induce the release of cortisol, and excess cortisol impairs function in the prefrontal cortex – an emotional learning center that helps regulate the "executive" skills, including working memory. The overproduction of cortisol was found in seniors who were experiencing memory loss. And it is believed by many neurologists that memory loss experienced by seniors is largely a factor of stress, not age. Prolonged exposure to cortisol has also been shown to shrink the hippocampus by up to 14%.

The *Reader's Digest* article mentioned previously reported that a few years ago a major U.S. study confirmed previous findings that high levels of cortisol, when produced for too long, impair mental retention. The alleviating factor is face-to-face contact with others. All evidence reports to social activities – anything from bridge clubs to evening classes – and particularly volunteerism – to relieving stress and improving memory. Seniors who double up on their volunteering activities live up to 44% longer than non-volunteers.

Chronic stress kills brain cells and effects memory, so a hassle-free life is a healthier life. In stressful situations, your weakest executive skills fail first and become more pronounced. Fatigue and information overload tend to weaken them further. Avoiding, releasing or being able to manage stress is important. You should re-examine your workload. Simplify if possible. Delegate and outsource. Pace yourself. Too much exertion without breaks taxes the executive skills, including working memory. In fact studies have shown that people who exert themselves mentally, such as resisting the temptation to eat chocolate or whatever, gave up on problems sooner when presented with them immediately afterwards. (*Scientific American Mind*, May/June, 2011)

Although drinking too much coffee has been associated with stress, in moderation it seems to give memory a boost. A brief article in the spring, 2014 issue of Health magazine describes a link between caffeine and memory. Michael Yassa of John Hopkins University asked 60 people to view a series of images of different objects. Then, five minutes later, after receiving either a placebo or 200 milligrams of caffeine, were tested the next day on their ability to recognize images from the day before. More people from the caffeine group recognized that an image was similar to rather than identical with one they had viewed earlier. Separate research published in the Journal of Public Health Nutrition also showed that one or two cups of tea a day can boost brain power and athletic performance. This held true for children as well.

Finally, don't take yourself too seriously. Laugher reduces stress hormones such as cortisol and adrenaline, aids immunity, changes mood for the better, helps you think – and improves memory. Sandra Kornblatt, in her book *A better brain at any age*, also gave an account of how humor during instruction led to increased test scores.

3.3 Sleep aids memory

You should also get plenty of sleep. Sleep deprivation definitely impairs functioning of the executive skills. For example, a student scoring in the top 10% in grades dropped to the bottom 9% after only seven hours per sleep per night and seven hours 40 minutes on weekends.

A study reported by John Medina in his book *Brain rules*, gave students a math problem to solve and told him there was also a shortcut they might find while doing the exercise. Then they showed the students the normal way to solve the problem. If they allowed 12 hours to pass and asked the students to solve more problems, about 20% discovered a shortcut. But if in that 12 hour period they also allowed them to have about eight hours of regular sleep, the figure tripled to about 60%. Every time they repeated the experiment, the sleep group outperformed the non-sleep group by about 3 to 1.

Students frequently sacrifice sleep to get more done when the reverse is true. They get more done when they get more sleep. Studies show that only 9 percent of material studied before noon could be recalled eight hours later. Yet 56 percent could be recalled after eight hours of sleep. It's believed that during sleep, information is transferred to long-term memory – in addition to the replenishment of cells needed for a healthy immune system. So don't sacrifice sleep in order to get up earlier – unless of course, you get to bed earlier as well.

The average person now gets 90 minutes less sleep a night than a century ago. In my lifetime the average amount of sleep we get has decreased from just over eight hours per night to 6.7 hours. And I recently read a figure of 6.5 hours, along with an explanation that this is the average amount of sleep people *say* they get, but by the measurement of brain activity while these same people were sleeping, the *actual* figure is 6.1 hours. Getting less than six hours of sleep a night can result in many of the problems already mentioned.

There is little doubt that sleep has restorative and memory-supporting powers. Restorative of sleep is to learning as Stephen Covey's "sharpening the saw" is to productivity. It's during sleep that we process new information. If you don't get adequate sleep, you're not going to remember things well.

One study showed that people are far more likely to learn a new skill if they were taught the night before as opposed to being taught in the morning and tested that night. Dr. Marie Pasinsky, a neurologist from Harvard Medical School and author of *Beautiful brain, beautiful you*, suggests that we actually learn while we sleep.

I'm not suggesting you hold your attempts to memorize information until the evening, although a combined evening session and morning review might be effective. But we also know that repetition is important in learning since it reinforces what was just taught, and it's always better to review a chapter in a book before you continue reading. So applied to memorizing, it might be wise to summarize the material you have learned just before a break and again before you go to bed at night.

You should include adequate sleep among the strategies for improving personal productivity.

3.4 Fuel for the brain.

Diet is important for overall health, and this includes the brain. Obesity leads to high blood pressure, which lowers cognitive function so watch your weight. A study published in the journal *Neurology* showed that people who are obese in middle age have almost 4 times the risk of developing dementia later in life than those of normal weight.

Proper nutrition can help prevent cognitive decline. What's good for your brain is good for your memory. Skipping breakfast is a not a good idea. Studies have shown that children and adults who skip breakfast do not perform well on tests at school or tasks at work. Janet Maccaro, in her book, *Brain boosting foods*, mentions supplements such as gingko biloba, known for its ability to improve memory and concentration. It is used in Europe to treat dementia.

EPA omega-3 fish oil is also recommended since it keeps the cell membranes in the brain flexible. There is evidence that omega-3 fatty acids – the ones found in many types of fish such as salmon and rainbow trout – slow up cognitive decline and reduces the risk of Alzheimer's disease.

Researcher Rodney W. Johnson, PhD, claims that chamomile tea, rich in luteolin, is not only relaxing, but also guards you against forgetfulness. He says it works by preventing brain inflammation that contributes to age-related memory lapses. Luteolin is also present in carrots, celery and green peppers.

Dr. Mehmet Oz, RealAge expert and host of a national TV show, recommends five important foods to give your brain a boost:

Blueberries, to help shield against harmful processes tied to Alzheimer's disease and premature aging.
Eggs, since they are loaded with selenium, a mineral that could help make your brain years younger.

Mustard, because it contains turmeric. He claims that getting just 17 milligrams of it a day (about a teaspoon of mustard) can help genes control the cleanup of cellular waste in the brain.
Salmon, since it is a great source of omega-3 fatty acids, including the type thought to have the most anti-aging effects on the brain.
Kale, since getting at least three servings a day of these leafy greens high in carotenoids and flavonoids can slow mental decline associated with aging.

Drinking water may also sharpen your recall skills according to research conducted at University of East London. The UK researchers believe that bringing water into an exam room can raise students' marks –as long as they drink it! Studies indicated that those who drank water while writing exams outperformed those who didn't. In one study the scores averaged 4.8% better. One explanation is that students are in a mild state of dehydration when taking exams and it is corrected by drinking water.

4 There's nothing wrong with your memory

4.1 Take a positive approach to memorizing

Negative self-talk can be destructive. Your mind hears what you say whether it's aloud or in the form of a thought. So never say you have a bad memory, or you have trouble with names or are becoming senile or have a touch of Alzheimer's. Your brain takes you at your word and it can become a self-fulfilling prophecy. Instead, take a positive approach to improving your memory.

You must be motivated to invest the time necessary to improve your memory; but motivation is the product of the *strength of your desire to achieve something*, and the *strength of your expectancy* that it will be accomplished by taking the action suggested. Or M = D X E. So if they don't think you will ever be able to improve, you will have a low motivation to stick with it. Or if you really don't want to change the way you are now, you'll also have low motivation. Desire can overcome a lot of obstacles. If people want something badly enough they'll crawl over broken glass to get it. But if they find that crawling over broken glass gets them nothing but bloody knees, they'll stop trying. They'll look for some other way. So both expectancy and desire are necessary to succeed.

One technique for getting information to move into your long-term memory is to visualize using it later. People participating in a German study were told to think about how something they learned that day may come in handy in the future were able to access that information far faster than people who learned the same information, but didn't try this trick. So just imagining that you will need a phone number or a person's name can help you recall it later.

If you are teaching students or training employees, make sure they know the relevance of the material being taught, and how it could be used in their career or life.

4.2 Don't use age as an excuse

Many seniors worry about Alzheimer's or other forms of dementia as they grow older. And the worry and fear in itself can cause memory problems. Instead, they should focus on keeping both their body and mind active. Research does show that the brain can continue to grow and learn and develop new connections throughout life. A healthy lifestyle, including regular exercise and a balanced diet, combined with activities that keep the brain involved, will more than offset the memory losses they may experience through normal healthy aging.

Our sleep needs, for instance, don't reduce drastically as we get older. Our sleep needs remain fairly constant throughout our adult lives. Older adults may begin to alter their sleep schedule or they may develop sleep disorders; but our sleep needs remain the same. So does our need for exercise. According to John Medina in his book, *Brain Rules,* studies conducted throughout the world indicate that your lifetime risk of dementia is cut in half when you participate in aerobic exercise on a regular basis.

Sure, scientific evidence does show that our ability to focus, recall events, and remember to follow through on verbal commitments decline with age. And as we get older, we are more easily distracted. But it's also a fact that only certain types of memory ability decline, and good time management practices and lifestyle habits will compensate for any such memory loss. And if you practice the memory techniques discussed in this book as well, you will be way ahead of anyone half your age in the ability to memorize and recall.

By time management I refer to the habit of writing things down, scheduling activities in your planner, making up a follow-up file, organizing your home, and so on. For example, Mehmet Oz and Mike Roizen, authors of *YOU: On a Diet*, claim that visual clutter slows down the brain. They say that's why clusters of road signs double the chances of missing the one you're looking for. It also explains why website designers aim for simplicity. So clearing clutter from your desk, office and home and leaving more wide open spaces also helps to clear your mind so it will be more productive.

By lifestyle I mean such things as regular exercise, a healthy diet, a consistent sleep schedule, and a mentally active life. For example, staying physically active, socially connected and mentally stimulated has been shown in studies to help keep brains sharp. One study, in particular, appearing in a syndicated column by doctors Roizen and Oz, showed that volunteering increases activity in the part of the brain that normally declines with age. One thing to avoid is multitasking. It taxes the brain at any age, but we get progressively worse as we age.

The myth about memory decline with age is more a function of expectation rather than fact. When seniors were told that people their age tend to suffer memory loss, they performed worse on memory tests than a control group who weren't given those suggestions.

Memory does not have to get worse with age. And if you have trouble remembering names or recalling information, it's probably because your ability to remember and recall is either unused or untrained. In one study, seniors absorbed more facts during a memory test than people in their twenties and thirties – and they were 30% better off at using the information later to make decisions. People are no more likely to forget at 80 as they were at 20.

5 Giving your memory a helping hand

5.1 The use of mnemonics

All memory systems, other than rote, rely on mnemonics. A mnemonic is a device, such as a jingle or rhyme or acronym used to aid memory. For example, most people will know what ASAP means because they have heard it and used it so often. Yet those letters could stand for almost anything. They could stand for "All students are people" or "Approach silently as possible." But once we hear the real meaning of something and review it a few times, the letters alone will make it possible to recall it. Our natural memories only need a hint to bring the memory out of mental storage.

5.2 Rhymes, jingles and other devices that aid recall

Jingles, rhymes, and catchy tunes are memorable and easy to memorize. Sometimes you can't get them out of your head. I still recall a commercial that starts something like "Pepsi Cola hits the spot, 12 big ounces, that's a lot…" And from about 60 years ago, "Mary, Mary quite contrary didn't seem to grow, because when asked to drink her milk, she'd always answer no…"

How were you taught to remember the date that Christopher Columbus discovered America ? How about
"In fourteen ninety-two
Columbus sailed the view (or ocean blue)"

How did you memorize which months have 30 days and which ones have 31?
How about
"30 days has September
April, June and November."

Were you taught how to remember the placement of i and e in words such as receipt, believe, weigh receive, sieve as follows?

"I before E
Except after C
Or when sounded as A
As in neighbor and weigh."

Even remembering the value of pi to 13 decimal places is helped by rhyme.

"How I wish I could determine of circle round
The exact relation Archimedes found."

Here you simply count the number of letters in each word – 3, 1, 9, 3 5, etc. – to get the answer. The highest digit is nine, so any word with more than nine letters is simply nine. And your natural memory will tell you where to put the decimal place. (When I refer to your "natural memory" I simply mean that you have to study the material enough to at least be familiar with it. The "gimmicks" simply makes the memorizing easier (and fun) and helps immensely with the recall.)

Many people still use the expression "spring forward and fall back" to remember to put the clocks ahead in the spring and back in the fall when changing to and from standard daylight saving time.

Some people have trouble remembering the difference between stalagmites and stalactites. Which ones hang from the ceiling of caves and which ones form from the ground up? An easy way to remember is to look at the ending of the second syllable of each word. The stalagmites has a 'g' standing for "ground" while the stalactites has a 'c', standing for "ceiling". My niece, Lauri, distinguishes between the two by thinking the stalagmites are mighty and grow up from the ground and the stalactites have to hang on tightly so they don't fall off the ceiling.

5.3 Acronyms and acrostics.

An acronym is a word formed from the first letters of the words that you want to remember. An acrostic is similar to an acronym except that the letters represent an entire phrase or sentence.

Many acronyms and acrostics have been used to recall information once it has been transferred into long-term storage. Here are some examples

Names of the planets in our solar system and their order from the sun:
Mercury
Venus
Earth
Mars
Jupiter
Saturn
Uranus
Neptune
Pluto

They can be remembered by the sentence, "My Very Economical Mother Just Saved Us Nine Percent." The first letter of each word is enough to remind you of each planet, just as HOMES reminded you of the Great Lakes.

Of course, Pluto has long ago been demoted since scientists decided it didn't meet all the criteria necessary to be classified as a planet; but I continue to include it by force of habit.

To recall the five great lakes that border Canada and the U.S.A, think of HOMES, and you have the first letter of each lake as a hint – Huron, Ontario, Michigan, Erie and Superior.

If you want to remember the Great Lakes from east to west, simply remember the phrase, Ostrich Eggs Have Metal Shells, and use the first letter of each word as your reminder.

The only three states of the west coast can be represented by the word, COW – California, Oregon and Washington.

The only 4 states whose boundaries touch at the same point, Utah, Colorado, Arizona and New Mexico, can be recalled by memorizing UCAN.

You can form your own acronyms or acrostics by converting your information to single words or initials and arranging them in an order that makes them easy to remember. For example a system for handling incoming mail might be called the FAST method – File it, Act on it, Schedule it or Toss it.

Here are a few more examples of common acronyms:

GASP = Group Against Smog & Pollution
MADD = Mothers Against Drunk Drivers
ASAP = As soon as possible
SAC = Strategic Air Command
KISS = Keep it Simple, Silly
SCUBA = Self-Contained Underwater Breathing Apparatus
RAM = Random Access Memory
PIN = Personal Identification Number
AWOL = Absent Without Official Leave
ZIP code = Zone Improvement Program

6 Taking advantage of the brain's ability to link information

6.1 The power of association.

Memory is the ability to retain and retrieve past experiences. It's a lot easier to retain experiences than to revive or retrieve them later. But association techniques help immensely by taking advantage of the brain's natural abilities. The brain is always making its own associative connections. That's why old songs you hear on the radio immediately remind you of past experiences that occurred while those songs were popular. Or why passing a prominent landmark reminds you of what was happening or even what you were thinking the last time you passed that landmark. Take advantage of this by associating what you want to put into long-term memory with something that is already there.

Back in 60 BC, Cicero discovered the advantages of linking places with images so that thinking of one would remind him of the other. A great orator, Cicero would rehearse his speeches by going from one room to another, reviewing a different part of his speech in each room. When the time came to deliver his speech, he would simply visualize his home, room by room, and repeat what he had rehearsed in each room. Even today, a speaker may say "in the first place" and "in the second place", meaning that he or she is switching from one point to another.

Plato and Aristotle also were both believed to have studied and used the association technique, and Aristotle was credited with four laws of association when he examined the processes of remembrance and recall:

1. *The law of contiguity.* Things or events that occur close to each other in space or time tend to get linked together in the mind. If you think of a cup, you may think of a saucer; if you hear a song, you may recall events that happened when that song was popular. When you see again the house that you were born and raised in, you are flooded with memories of things that happened at that time. When you see the ocean, it may remind you of a time you almost drowned there. And so on.
2. *The law of frequency.* The more often two things or events are linked, the more powerful will be that association. If you have a cinnamon bun with your coffee every day, and have done so for the last twenty years, the association will be strong indeed -- and you will probably automatically order a cinnamon bun – or think of one – every time you have a coffee.
3. *The law of similarity.* If two things are similar, the thinking of one will tend to trigger the thought of the other. If you think of a married friend, for instance, it is hard not to think of the spouse. If you recollect a Mediterranean cruise you took many years ago, you may find yourself thinking about other cruises you took as well.

4. *The law of contrast.* On the other hand, seeing or recalling something may also trigger the recollection of something completely opposite. If you think of the tallest person you know, you may suddenly recall the shortest one as well. If you are thinking about an exam you did extremely well in, you may be reminded of one that you failed miserably.

People have used the law of contiguity, the tendency of the mind to associate everything, to remind themselves to do certain tasks. For example, if I thought of something I had to do in the morning but I was already in bed, I would turn my slippers facing the opposite way. As I tried to slip into my slippers I would realize that I had done this to remind me of something. Trouble is, most of the time I would have a problem remembering what I was supposed to remember. I failed to make a visual link between the slippers and the thing I was trying to remember. You could tie a string around your finger or put an elastic band around your wrist and all it would normally do is remind you that you had to do something. But in many cases you wouldn't remember what it was you are supposed to do. You have to form a direct, memorable association between the backward slipper and the item you have to tend to in the morning.

If I wanted to remember to put out the garbage in the morning, for example, I should have visualized garbage overflowing in those slippers to make it vivid and memorable. I would feel the banana peels and left-over mashed potatoes squeezing through my toes. Sharp tin-can edges would cut my feet and I could feel the pain and see the blood. Not a pretty sight. But in the morning as I tried to get into my slippers that image would pop into my mind. And there would be no mistaking what it was I had to do that morning.

Most memory systems are based on this law of contiguity where we associate something we want to remember with something that we already know or can see, touch or feel. This technique is referred to as intentional association.

6.2 Intentional association.

Think back to your early school days. What clues did the teacher suggest in order to make it easier for you to recall information? Some of the memory aids or "gimmicks" are probably still with you today. For instance, do you know the names of the Great Lakes bordering Canada and the U.S.A mentioned in the last chapter? Easy, they're H.O.M.E.S., which translated means, Huron, Ontario, Michigan, Erie, and Superior. A flimsy clue when you think about it, for the letter 'H' could stand for thousands of names. But once we learned that the name of the lake is Huron, all we need is the first letter 'H' to remind us of it. To recall it from long-term storage we *associate* the letter 'H' with the full name Huron.

What other recall clues have you learned? How about, "Every Good Boy Deserves Favor" as the lines of the treble clef of the musical staff? Simply take the first letter of each word and get E,G,B,D and F.

If you associated clues such as these to remember information ten or twenty years ago, chances are you will still be able to recall the information today. For the brain is an amazing organ. It remembers everything you put there. All you need is a way of extracting it at will.

6.3 Absentmindedness

Absentmindedness can be helped through association and visualization as well. Of course, absentmindedness actually means your mind is absent at the time you do something – usually because it's preoccupied with something else. This makes it more difficult. For instance you may find yourself staring into the refrigerator and asking yourself, what am I looking for? Or where are my car keys? Where did I put my glasses? If your mind is absent when you do something, there is nothing to associate it with! So it takes more than gimmicks to stop this. You have to be aware of what you are doing. But you can train yourself to be aware if you practice making an association every time you put something away. It only takes a fraction of a second to visualize an association. For instance if you're putting the keys on top of the refrigerator, for a split second visualize these keys being frozen and covered with ice and stuck to your hand or better still, stuck to your tongue. Feel the pain, the intense cold. When it's time to retrieve your keys, you'll recall that vision, even feel the pain and relate it to the refrigerator. Your natural memory will tell you they're not in the freezer!

When you are storing something for a period of time, such as putting away a spare set of eye glasses, or putting away a winter sweater, form an association as well. If you're putting your glasses in the side table beside your bed, visualize the drawer smashing the glasses into a thousand pieces as you close it. See the glasses fly in all directions with small slivers of it hitting your face. Feel the pain, the blood running down your face. The more vivid, the better. This can be done in a fraction of a second. Also repeating aloud that you are putting your glasses in the side table drawer also helps get it into your long-term memory. As does having a logical reason for putting them there, such as that's where you keep spares, such as keys, gloves, batteries, whatever.

7 Your brain loves to hear stories

7.1 Visualize to memorize

Visualization is a powerful tool for connecting routine events to the memory. In the process of creating the connection you are creating the memory itself.

Words and facts that you can visualize – actually see in your mind – are easier to memorize and to recall later. The more vivid an impression, the better the chance you have of remembering it. Combine this fact with the association technique just described and you have a powerful way of memorizing facts so they can be recalled later.

All memory experts agree that people never have bad memories, only untrained ones. But it's really untrained brains that they are referring to. I will not be asking you to try to remember much of anything. As I go through the association techniques – simply visualize the pictures they paint in your mind.

For example, assume you have to memorize the 10 largest cities in the U.S.A. in order of population. The following list was accurate as of July, 2013 according to Wikipedia.

1. New York
2. Los Angeles
3. Chicago
4. Houston
5. Philadelphia
6. Phoenix
7. San Antonio
8. San Diego
9. Dallas
10. San Jose

What you should do first is review the list a few times to become familiar with the cities. Don't worry about the proper order at this point. Now *visualize* something to represent New York. Then link that object to one that represents the next largest city, Los Angeles. You will memorize it in such a way that recalling New York will help you recall the next city, "Los Angeles," and so on.

You choose something as a clue or symbol for New York since it is difficult to visualize a specific city – let's pick the Statue of Liberty. Now visualize the Statue of Liberty, arm upraised holding the torch. Circling around that torch visualize a bunch of angels. Actually see them in your mind's eye. Put action into them. They are flapping their wings furiously. Now when you think of the first city you will see the Statue of Liberty, which represents New York. But that's not all. You will also see angels circling the outstretched arm, which will remind you of Los Angeles. "Angel" does not have to sound exactly the same as Los Angeles. It's close enough to provide the clue that will allow you to recall Los Angeles. just as the H in the H.O.M.E.S. acronym was enough to remind you that the lake was Huron.

Now you simply continue building the story as you go. Visualize symbols or clues to represent the cities and link them in some way to the previous city. So the angels are reaching up with both hands and grabbing hold of the legs of the yellow chicks flying overhead. The fact that chickens don't fly is immaterial – the more ridiculous your picture, the better. Make the association wild, colorful, with lots of action, and you won't be able to forget it. The chicks are desperately trying to escape, squawking loudly, and feathers are flying everywhere. Well, chick is close enough to remind you of Chicago.

When you review your story after you have linked about four, eight and finally ten cities, you review them by seeing only the first city, New York, represented by the Statue of Liberty. Then you ask yourself, "What's happening to the Statue of Liberty?" Then you'll see in your mind's eye those angels flying around the outstretched arm – Los Angeles. So you ask, "What's happening to the angels?" Then you'll see them grabbing hold of these chicks – Chicago. So you ask, "What's happening to the chicks?" And you'll see them trying to scramble into a house to get away – and of course I picked house to remind me of Houston, and so on.

It's better to build your own story. If it's yours, you'll remember it more easily because you're using your own imagination, not somebody else's. Don't try to remember the previous ones as you develop your story; concentrate on linking only two at a time. When you review them, you will be able to recite them, one at a time as your story unfolds. If you make a mistake, strengthen the link by making the connection more dramatic or colorful or vivid, and review the cities again.

7.2 Recalling information for presentations or exams

Assume you need to memorize the seven leadership styles depicted by Tannenbaum & Schmidt's continuum of leadership, which show various degrees of employee involvement and trust. You would first need to review the material so that you understood it, and then choose a key word from the description of each style to use as a link in the visual story. I have underlined the key words that I have chosen to remember. Once I recall these words, each one associated with the next, it will be enough for my natural memory to take over and provide a description of each leadership style.

In order to do that, you have to study the material. There is indeed no such thing as a free lunch when it comes to memorizing material. And the more detailed or complex the material, the more time it will take. But the intentional association technique makes it a lot easier and faster to recall the material. In fact don't be surprised if the information springs into your mind before you even think of the association.

Assume the following is the description provided for you from an instructor or text or Internet website. Read it over a few times, understanding what it says, and seeing the progressive increase in employee involvement in the different styles. Assume you will be asked to provide a description in an exam the following day.

1. The manager makes the decision and then **announces** it. No questions asked. This is the dictatorial style with no room for discussion. No involvement on the part of the team or staff.
2. The manager makes the decision and then **sells** it to the group, feeling it's important that they know the reason for the decision and why it is the right one. Still no involvement of the group.
3. The manager makes the decision, announces it, and then invites **questions**. The group still has little or no say in the decision but there is a feeling of involvement.
4. The manager makes a **tentative** decision only, solicits input from the group, and then makes the final decision. There is a great deal of involvement by the group and flexibility as to the final decision.
5. The manager presents the **problem** to the group with no preconceived idea of what the solution will be and solicits suggestions from them. Based on their input the manager makes the decision.
6. The manager asks the **group** to make the decision after explaining the situation in detail and providing any necessary guidelines. The manager accepts whatever decision they make.
7. The manager permits the group to **function** within prescribed limits and make decisions as necessary as they go about their work.

Using the key words that you have selected, make up a story in your mind as you did for the ten cities. The story will give you the key words and the key words will remind you of the leadership styles. Then simply describe each leadership style in your own words.

For example, here's the story that I visualize.

I see a radio announcer standing in front of us waving his arms and speaking to us. As I visualize this, I quickly write down the word "announce. Then I ask myself, " What is he saying? He is talking about a big sale that is on now. I jot down the word "sell." What is the sale about? Well everyone is asking these questions. I can see the crowd putting up their hands and shouting "What is It? What's for sale? How much is it?" etc., and the announcer replies "Tents. They are selling tents." I am reminded of and record the word, "tentative." Now I think, what did I associate with tents? What's happening to the tents? And I see a whole pile of presents being brought into the tents, and I jot down the word "presents." But what's happening to the presents? I see a large group of people descend upon them and rip them open, paper flying everywhere. I jot down another word, "group." What's happening to the group? They are beginning to all function efficiently, doing their own thing. So I add the word "function" to my list. My list of words now read as follows:

Announce
Sell
Questions
Tentative
Present
Group
Function

Every time I want to recall the seven styles of leadership I go through this mental process, quickly jot down the seven words, and my natural memory will fill in the blanks, "announce" the decision or "sell" the decision or tell the what you will be doing and answer any "questions" or give a "tentative" decision but ask for input and be willing to change, or "present" the problem and let the group discuss it and make a decision collectively or simply delegate the power to the employees to make their own decisions based on the circumstances as they carry out their "functions." You can add as much detail as you can recall. And if you have read about the different styles and their advantages and disadvantages, you may be surprised at how much you can recall. All your brain needs is a little help dragging it from your long-term memory.

Whether it is a list of cities, a speech you have to deliver, information for exams, or any number of things, this method of linking the main points to form a story will never fail you. And the more you do it, the easier and faster it gets.

With speeches, you simply list the topics, stories or anecdotes you want to mention. Then link them together like we did with the 10 largest cities. When you're giving speeches it's assumed you know your topic. You don't have to memorize the whole speech. You simply want to remember what to speak about next. I used this extensively some 40 years ago when I started giving public seminars. It's a fool proof way to prevent yourself from forgetting to mention something when you're overcome with stage fright.

Whenever you memorize information, such as the ten largest cities, or 7 things you're going to pick up at the store, or 12 things you're going to do when you get to work, it's a good idea to review them periodically. That will cement them in your mind and the memory won't fade. For instance, I can still rhyme off most of those one hundred 4-digit numbers over 30 years later. I haven't reviewed them in 20 years, but I reviewed them so many times originally, they're there forever.

Review your stories a few times and it will be impossible to get them out of your head, proving the system works. You can memorize presidents, cities, lists of information for course exams, grocery lists, things to do, books of the Bible – almost anything really.

8 The limits of story telling

8.1 Remembering a list of items in any order

If you have a list of items and you want to be able to rhyme off the fifth item or ninth item immediately, you would have to run though all the previous mental pictures until you get to these numbers.

You can solve that problem by memorizing a set of number keys or anchors to associate with items on your list. You can memorize 10, 20, 30 or more of these number keys depending upon how many items you think you would have to remember at one time. Now this requires a little effort – but very little. And these anchors will become more firmly entrenched in your long-term memory the more you use them. Then you would be able to quickly give the fifth largest city or the 10th president of the United States without having to run through the entire list.

Since we can't visualize numbers as easily as we can visualize pictures, we represent each number by a picture, scene or happening. For example, the following are the objects I visualize for the first ten numbers.

1. Wand (Because a wand looks like the number 1)
2. Swan (Because a swan is shaped like the number 2)
3. 3-leaf clover (Because most clovers have 3 leaves)
4. Chair (Because most chairs have 4 legs)
5. Star (Because hand-made stars always have 5 points)
6. Elephant (Because the trunk of an elephant is shaped like the number 6)
7. Pick (Because some picks that you dig with are shaped like a 7)
8. Skater (Most figure skaters practice doing figure-8s)
9. Pipe (Tipped over, a 9 resembles a pipe that you smoke)
10. Potatoes (Because I'll never forget having to lug home a 10 lb. bag of potatoes whenever I went shopping for my mother.)

Make sure these keys are your own. If the number 7 reminds you of something other than a pick-axe, by all means visualize that instead. It's easier to picture and remember your own objects rather than someone else's. Thinking of potatoes when you hear the number 10, for example, would never work for you unless, when you hear the number 10, you think of the stupid association made by the author of this book.

Review these number keys several times in and out of order. Write down the numbers 1 through 10 and the corresponding image. When you have memorized them all, you are ready to associate any list of items that you want to remember. They can be items you have to buy at the store, things to do during the day, people you have to call or emails you want to send. If you memorized the ten largest cities this way, you would be able to rhyme off the fifth largest city immediately, as well as the ranking of all the others.

Once you have these keys memorized, you can link each item on your list to its corresponding key, just as we did when used the linking method, making these pictures vivid, complete with sound, action, color, -and the more ridiculous the better.

Let's use the new keys to a list of things we have to do.

1. Submit an **expense** account.
2. Set up a **meeting** with your staff
3. Return **books** to library
4. Write an article for a **magazine**
5. Install software on your **computer**
6. Call Sam regarding a **travel brochure**
7. Select the **luncheon** menu for an open house
8. Write a speech on **time** management
9. Retain the services of a **bookkeeper**
10. Mail "**Thank you" cards** to associates you met at a conference.

I have underlined the words that I have selected to remind me of each item. For example if someone asked me what it is I had to do that involved expenses, I would immediately recall that I had to fill out an expense account. So your task is to link or associate the numerical memory key with the underlined word – in this case "expenses." You do that in the same way you linked the 10 largest cities – by creating an image in your mind that is memorable. Let's assume the wand (key for number 1) is being waved frantically over a pile of dollar bills by a fairy or witch or whoever, multiplying the pile of money into millions of dollars flying about and filling the room. Put action and color into your image and make it as wild and weird as you like. Money would be close enough to remind you of expenses. Remember, you already made up your "To Do" list so you know what it is you have to do. You simply need to jog your memory so you can recall it.

Link the other items in the same way. A bunch of swans (number 2) could be having a meeting around a boardroom table, flapping their wings and squawking as one of them scribbles something on a flip chart. Three-leaf clovers (number 3) could be raiding the library, tossing books everywhere as the rummage through the shelves. Actually see the scene in your mind's eye. Chairs (number 4) could become animated and start ripping up magazines and tossing the pages into a roaring fire, and so on.

To recall your list later, you would say to yourself, "OK, number one is a wand. What's the wand doing? Oh yes, I see it being waved over a pile of money that is multiplying wildly and flying all over the room." Your natural memory would tell you that it must be the expense account that you have to prepare. In the same way you could visualize the swans having a meeting, the three-leaf clovers raiding the library and the chairs ripping up magazines.

Try it yourself, making up your own "To Do" list, underlying the most relevant words, creating your wild images and then recalling the numbers keys one at a time, visualizing the images they bring up and being reminded of the items you have to recall. You will be surprised at how easy it really is. The greater your imagination, the easier it will be.

Review the images in your mind as you take a shower, clean the house or walk to work. What happens when you want to use the keys for another list? Once you have finished your list or have written the items down, you can use the same keys. They erase the other images as you put on the new ones. I use the same keys almost every day.

You may have more than ten things to remember. If so, you may want to make up more keys, say from 11 to 20.

Here are the ones I chose, but make up your own. They probably don't make much sense to you.

11. picket fence (looks like a couple of slats in a picket fence)
12. clock (12 o'clock is a significant time)
13. black cat (some people think this is unlucky)
14. lightning (14 kind of looks like lightning bolts – bit of a stretch though)
15. elevator (I picture an elevator opening at the 15th floor and the objects spilling out)
16. pretty girl (sweet sixteen)
17. dancer (I recall going to my first big dance when I was seventeen)
18. beer (used to be the drinking at one time in my province)
19. cribbage board (In cribbage, 19 mean your score is nothing)
20. horn of plenty (rhymes with twenty. I remember it from an old Dale Carnegie course)

If you want to remember things forever, either use different pegs or use the story technique that we used earlier to memorize the ten largest cities.

9 Remembering names and faces

9.1 I'll never forget what's his name.

We all have trouble remembering names at one time or another. But those occasions can be reduced to a minimum if you conscientiously apply the following suggestions.

When you have trouble remembering someone's name it's either because you don't hear it properly in the first place, or didn't show sufficient interest to imprint the name into long-term memory storage. Or, you lack sufficient associative information to allow you to recall the name later.

To overcome the first two barriers, make up your mind now to be genuinely interested in people. Associate as many facts as possible with the people you meet. Repeat the name several times in the conversation. Try to visualize the face later. Practice the old A.I.R. formula (Attention, Interest, and Repetition). For above all, you must *want* to remember. The brain is a miraculous piece of machinery. It senses your desire to remember, and transfers the information to long-term memory for future use.

To ensure that you can recall the name later, take advantage of your natural powers of association. Just as the Statue of Liberty reminded you of the city, so a person's face can remind you of his or her name. And the method is the same.

Select a predominant feature of a person's face – the nose, lips, chin, eyes, etc. and mentally associate the person's name with that feature. Seeing the person's face at a later date – specifically that one feature – should allow you to recall the name by association. The feature reminds us of the name.

Here's an example. You meet someone called Billy Carswell. While you're talking to him you convert the name to something tangible. The name "Billy" may remind you of a b*illy goat* and "Carswell" breaks down into the objects *cars* and *well*. You search his face for some outstanding feature and finally select the nose because it's slightly larger than normal. Now you draw a mental picture of a huge pink *billy-goat* tearing out of the nostrils and smashing into hundreds of multi-colored *cars,* sending them careening into a wide bottomless *well*. The point to keep in mind when forming your picture, is to make it colorful, exaggerated and with plenty of action. The more striking, bizarre or absurd the association, the easier you'll remember it.

When you meet this person again, you search his face and ask yourself which feature you had selected. Oh yes, his nose. Now what was happening to that nose? Of course, a giant colored *billy-goat* is charging out of his nostrils – the name is "Billy". And the goat is smashing into a bunch of cars, knocking them down a well. His name is "Carswell".

Sounds complicated. It's not really – although some people find it difficult to convert the names to tangible objects or to select an outstanding feature. But in most cases, just the effort in trying to do so is sufficient. For you have paid attention. You have concentrated on the name and the face. They are imprinted indelibly in your long-term memory and need only a clue – an association – to be retrieved later.

Don't be discouraged if you have trouble picking a clue or symbol to represent the name. This will come with practice. And the clue does not have to be that good. If the name is "Henderson" simply visualize a "hen" clawing at the person's bushy eyebrows will be enough of a clue. Once your mind gets the clue, "hen", the whole name "Henderson" will be retrieved from your long-term memory storage.

Practice converting names to clues for recall. How would you visualize the following names?

Robbie McLeod
Donald Canning
Al Gunn
Mike Lemon
Lorena Pitt
David Stinson
Anne Smith

Convert each name to something that sounds a little like the name. Something that you can visualize. Now I said something that *sounds a little* like the name. Although many memory experts would have you take great pains in converting to an identical "sound alike", it's not necessary. For example, if you really thought about the first name for awhile, you could come up with four words, ROB, BEE, MACK and LOUD, which would sound ot the name exactly. Then you could build a word picture such as a BEE ROBbing a MACK truck and yelling LOUDly as it makes it's escape. Of course you would have to search out a predominant feature of the person's face and link this picture to it.

It will work. No doubt about it. Except that it might take too long with more complicated names. The person would be long gone by the time you completed your word puzzle.

So keep it simple. Just visualize a ROBber yelling LOUDly. The important thing is to actually visualize it. Picture the robber with a black mask, or stocking over his face, pulling at the person's nose or trying to steal an ear. Try to associate the robber with the feature that seems to stand out. If you simply pick anything. The eyes, an ear, the hair, eyebrows – whatever you think stands out the most.

Reinforce your picture every chance you get. If you're meeting several people, take your time. Keep looking back at the people, you've just met. See that word picture you've drawn in your mind. The important thing is not the picture you create. The important thing is how hard you try. For if you try hard, you have forced yourself to really observe the person's face. And to hear the name. And to associate the name to the face.

Let's pick substitutes for some of the other names:

Donald Canning: How about Donald Duck sticking a can over some part of his face.

Al Gunn: Ale is close enough to Al. Perhaps a gun shooting ale into his ear.

Mike Lemon: Microphone can be visualized for Mike. Lemon is great as it is.

Lorena Pitt: Arena is close enough to Lorena. And a peach pit or snake pit.

David Stinson: You could visualize David as in David and Goliath. Have him wearing a big Stetson.

Anne Smith: Anne could be represented by an ant. Blacksmith is okay for Smith.

Get the idea? Don't spend too much time finding a "sound alike" for the name. Spend more time trying to link it to the face.

9.2 Rules for remembering names

If the above method of connecting the name to the face seems too weird or you find it absolutely impossible, don't worry about it. Simply practice the following suggestions and your memory for names and faces will still improve immensely.

1. Make a conscious decision to remember the name of each person you meet. You must really want to do it. Motivation is the key to a good memory.
2. Listen carefully to a person's name when you are introduced for the first time. If you don't hear it properly ask them to repeat it. If it's a difficult name ask them to spell it. Nobody will be annoyed when you take an interest in their name.
3. Repeat the person's name immediately upon hearing it. Eg. "Glad to meet you, John." Repeating it aloud helps you to retain it. Keep repeating it throughout the conversation and again at the end.
4. Center the conversation on the person you are meeting, not yourself. Learn as much about the person as possible. The more things you know that are associated with the person, the more handles you will have to pull the name out of your long-term memory later. Having a genuine interest in people helps.
5. Truly observe the person's face, noting any prominent facial features such as nose, mouth, cheekbones, chin, ears or eyes. Try to link the name to the face using association techniques, but don't worry if you are unable to do so. The effort is all you really need.
6. At the earliest opportunity, write down the name. The act of writing it down also helps put it into long-term memory. Visualize the person as you do so. Keep a notebook of people you meet and review it periodically, visualize the people each time.
7. When you will be meeting a large group of people such as at a seminar, meeting or party, plan ahead. Get there early and meet them as they arrive. Introduce yourself rather than let the host hurry through the introductions. Spend time with each person before moving to the next. After meeting two or three people, pause and review the names of those you have already met. Then go on to the next one. Take your time. It's easier to remember people you meet at seminars or formal meetings since they are usually stationary for large periods of time so you can review the names and faces repeatedly.
8. Continually practice. Meet as many people as possible each day. The server at your favorite restaurant, the person who delivers the paper, the gardener, the hairdresser, the retail sales clerk, the person at the drive-through window and so on. The opportunities are unlimited. Many of them even wear name tags so you can immediately capture heir name and associate it with their face.

10 Remembering telephone numbers, statistics and more

10.1 The numbers game

If you have a natural memory for numbers, you may not need this. But most people, including myself, have trouble remembering telephone numbers, parking lot numbers, hotel room numbers and the dozens of other numbers encountered on a daily basis. Eventually, through use, numbers will be transferred to your long-term memory storage system. But numbers used infrequently can take a long time – and cause a lot of inconvenience and frustration in the meantime.

Much of our trouble stems from the fact that we tend to over-estimate our ability to remember. If we're on a business trip for example, and we want to remember the mileage reading, we mentally record the last three digits, repeat them a few times to ourselves, and are satisfied that we can remember them. But four hours later, when we arrive at our destination, we are unable to recall them. They had never been transferred to our long-term memory.

It's more difficult to get *numbers* into long-term memory storage since they form no visual image – no pictures – in our minds. How can we picture a '6' or a '24'? How can we associate a telephone number with a person?

If you're lucky some of the larger numbers can be broken down into smaller units that are easier to remember. For instance, 654525 can be broken down into 65 – 45 – 25. These three 2-digit numbers progressively increase by 20, and makes it easier to memorize them. Or the larger number 198081012 can be broken down into 1980 (a year) followed by 8-10-12 (Three 2-digit numbers that increase by 2).

But in most cases, you won't be that fortunate. A fool-proof way of memorizing numbers is to convert the numbers into words – preferably objects – that you can easily visualize, as we have been doing with the cities, "To Do" lists and names and faces.

We already know we can recall objects. Because objects form pictures in our minds and pictures enable association and instant recall. I bet you still know the largest cities in the United States. The first one is New York since we can visualize the statue of liberty and *associate* it with the city. And we can visualize angels circling the outstretched arm, which gives us the second largest city, Los Angeles. And so on. We can do the same thing with numbers if we can first express them as meaningful words that can be visualized.

To do this, we must memorize a code. It may look difficult at first, but stick with it. It's no more difficult than the ten peg words you memorized earlier. I'll try to give you hints on memorizing them as we go along.

This code has every digit (from 0 to 9) represented by a phonetic sound. Here they are:

0 is represented by the sound of "s" or "z". You can remember by thinking of the word "zero".
1 is represented by the sound of "t", "d", or "th" –Think of "t" or "d" as having one down stroke.
2 is represented by the sound of "n" – Remember it because "n" has two down strokes.
3 is represented by the sound of "m" – and "m" has 3 downstrokes.
4 is represented by the sound of "r" – you might remember it because "r" is the last letter in "four".
5 is represented by the sound of "l" – some experts suggest remembering it as the first half of 50, which in turn is represented by the "L" in Roman numerals. But if this seems too complicated, just memorize it by rote.
6 is represented by the sound of "j" or the similar sounds of soft "g" (as in gem), "ch" or "sh" – the written "j" does look like a 6 in reverse, so you might remember it this way.
7 is represented by the sounds of "k" or the similar sounds of hard "c" (as in cat) and hard "g" (as in go). There's no memory aid except that "7" looks something like a key. If it helps, use it.
8 is represented by the sound of "f" or the similar sound of "ph" or "v" – to memorize it you might think of "f" as in fate (pronounced f-eight)
9 is represented by the sound of "p", the similar sound "b" – You can remember it because "p" looks like a mirror image of "9"

All the above sounds are consonants. Ignore all vowels, a, e, i, o, u, y and such letters as h and w. They will be used strictly as fillers, with no meaning.

Don't read any further until you have memorized the above code. Test yourself. What's number "7"? That's right, it's "k" or hard "g" or hard "c". Now what's number 9? Number five? Study them until you know them in and out of order. Then read on!

Now for practice, let's convert a few simple numbers to meaningful words that you can visualize:

71 represents hard "c" sound plus a "d" or "t" sound. It can be represented by the word ***C**a**t*** or ***C**o**d*** or ***G**a**t**e* o ***G**oa**t***. There are dozens of words you could pick. Remember, vowels don't mean anything – they're only fillers.

901 represents "p" or "b" sound, a "z" or "s" sound, plus a "t" or "d" sound. It can be represented by the word ***b**u**s**t*, ***p**a**s**t**e*, ***p**o**s**t* and so on. Or use two words such as we***b*** ***s**ui**t*** or ***p**a**ss** i**t***. Note that double letters are pronounced as though there were only one – so they represent only *one* number. ***Batter***, for example, would represent 914 *not* 9114.

5186 represents the sounds "L", "t" or "d", "f" or "v" and "sh", "j", "ch" or soft "g" – it could be represented by ***l**ea**d** **f**i**sh***, ***l**i**d** o**f** a**sh***, ***l**igh**t** **f**i**sh***. Note in the last example the "g" in light is not pronounced therefore is ignored.

Now practice on your own. Make up words from the following numbers

12 _____
85 _____
120 _____
4684 _____
57432 _____

There are words and combinations of words you could have used including "ton", "file", "dance", "rush far", and "like Roman". Don't waste time trying to work them into one word. Form two or three words: you can always link them together.

For example, if you want to remember the telephone number 921-2975 you might come up with the words "pin it on back wall", or "paint knob cool" or "be not in bagel". Then to associate the words with the person, simply visualize that person pinning something on his back wall or painting the door a cool color, or climbing inside a giant bagel. It's easy to remember a phrase. But it's sometimes difficult to remember a number. Especially if you don't use it very often.

Practice converting telephone numbers to phrases or groups of words and see how easy it is to remember them. The uses of the number code are unlimited. But here are a few specific instances where I have found it useful. Before I start though, let me state that the best method for remembering numbers, like anything else, is to write them down. Then you only have to refer to them. So, if you're in a restaurant or someone's office, don't attempt to commit the number to memory when you can simply jot it down in your PDA. There are many instances where this is impossible or impractical – and *that's* the time you use this memory system.

If I'm driving to the airport, and I have to note the mileage reading in order to charge it back on my expenses, I simply convert the last three digits of the odometer reading to an object. I then associate the object in some way with the dashboard. Not only do I remember the number, more importantly *I remember to remember the number*. (I used to forget to look at the odometer reading at the end of the trip). For example, if the numbers were 410, I would convert it to "rats" and then picture a swarm of huge, vicious rats tearing apart the odometer on my dashboard. During the trip, whenever I glanced at my dashboard, I could visualize those rats. It would reinforce the image even more. At the end of the trip, a glance at my dashboard would once again bring the image to mind. I couldn't forget it if I wanted to. And "rats" can only be deciphered as 410. If I were to make another trip the same day, I would follow the same procedure. There's no fear of having more than one image re-enacting their scenes on the dashboard; the most recent image is the one that comes to mind first.

In working with numbers the same principles discussed in previous chapters apply. Make your images ridiculous, exaggerated, colorful, full of detail, with lots of action. The more vivid, the better.

When I arrived at the airport and parked, I made a point to look back at the car to visualize it's position in relationship to its surroundings. Always do that. Especially in large parking lots. But at Pearson International Airport in Toronto this doesn't help me very much since it's a continuous mass of concrete with not many identifiable landmarks. So I look at the parking spot number and as I walk to the terminal I make up a word and associate it with the car itself.

That particular lot has number A1, A2, B1, B2 etc. No problem. If the number were B4, I would convert the 4 to an "r", form the word "beer" and picture my car swamped by a tidal wave of foaming beer. Or have hundreds of cans of beer falling out of the car as I opened the door. When arriving back in Toronto two or three days later, I have never had trouble recalling the image and quickly translating it into the number – or in this case, combination of letter and number.

I find the number system helpful at conventions as well, It's easy to memorize room numbers, including hospitality suites, and it saves a lot of time and inconvenience.

Even if I write the numbers down, I usually memorize the ones I know I will be needing. It's a terrible nuisance keeping track of the scraps of paper or programs in my jacket, pants pocket or briefcase. In the case of room numbers, I always convert the number to an object and associate it in some way with the person (similar to the method described for telephone numbers in the previous chapter). So if Jack is in room 814, I might visualize Jack dressed as a "fighter", complete with purple shorts and boxing gloves. A reminder here is that the "g" in fighter is silent. And if it's not pronounced, it's not used. There's usually a wide variety of words to choose from. In this case you could pick "Vader" (Darth Vader), "Fatter"(don't forget, double letters are pronounced as one,) Fodder, Feeder, or a dozen others – each one translating into 814.

It's those short numbers like the combination on my lock at the club, a street address, the price of a product, a part number that I used to have trouble with. Now I can quickly translate the number into an object, paint a mental picture – and presto! No more fear of forgetting. For example, I remembered that my parking spot at a condo was 49 because I pictured my car being wrapped in *rope*.

And it works just as well for longer numbers. I've committed my driver's license, health insurance number, social insurance number and one of my credit card numbers to memory. I find it convenient to be able to recall them without having to dig them out of my wallet.

It's easy memorizing the longer numbers once you know the code, because you can usually link words together to form a story – which seems to stick forever in your memory.

10.2 Remembering statistics

If you want to remember statistics you can convert the numbers to words and link the words together to form a story. Ignore the decimal point. Your common sense and natural memory will tell you where to put the decimal point when you convert from the word back to the number.

For example, assume you want to remember net profit figures for the last ten years. Convert the numbers to words as follows:

Year	***Net profit %***	***Code Words***
2005	1.4	water
2006	3.0	mouse
2007	4.1	rat
2008	6.5	chill
2009	8.2	oven
2010	12.1	dent
2011	13.9	dump
2012	15.0	dolls
2013	17.4	tiger
2014	18.0	doves

Your words could differ from those suggested. Choose words that you can easily visualize, then link them together to form a story in the same way that you memorized the ten largest cities. If you needed to be able to rhyme off the profit for individual years without having to mentally run through your story, you would use the number keys – wand, swan, clover, etc. and link the word to those keys. Alternatively you could convert the years themselves, 2005, 2007, 2008, etc. into words and link the date words to the code words.

Take the first figure, 1.4. You could choose tire, tree, tar, deer, door, tear, waiter or any number of words that all spell out 1.4. (Your natural memory will tell you where to put the decimal point. After all, these are your profit figures and you know you didn't make 14% net profit in the first year.)

I happened to choose *water*. Remember, the W is ignored and double t is treated as a single t. You might have to review the rules a few times and practice before you become really proficient at picking out words that can easily be linked together to form a story you can visualize. As I look at the profit figures, and see the words, I can make up the following story to visualize in my mind.

There is a rapidly moving river of *water* flowing down a field and a *mouse* falls in and is being swept downstream. A *rat* jumps in and kills the mouse. (Like all our stories you have to ask "What happens to the rat? You only have to keep one link in your mind at a time.) The rat scrambles to shore and gets a *chill*. So somebody sticks him in an *oven*. The oven gets smashed and has a big *dent* in the side. So somebody takes it to the *dump*. The dump happened to be overflowing with old *dolls*. The dolls are being ripped apart by a ferocious *tiger*. The tiger is being swarmed by a huge flock of *doves*.

The story can easily be memorized since you can visualize it happening, and you simply link each item, water, rat, chill, oven etc. with the next item on your list. Then you convert the words, mouse, rat, chill, oven, etc. to the numbers they represent.

10.3 Go with the flow

Stress plays havoc with memory – both working memory and recall – so don't be overwhelmed by the numbers code or any other technique in this book that you might find too much of a struggle. Just make it a habit of writing things down and reviewing what you have written. But any kind of learning exercises the brain, and exercising the brain automatically strengthens your cognitive skills, including memory.

Intentional association is not difficult since it simply uses the mental association ability that already exists.

The most important thing you can do is to practice the old AIR formula – attention, interest and repetition- at all times, whether in school, at work, in a meeting, attending a conference, or spending time with your family. In this digital age of speed, with smartphones, email, social media, the Internet, and the tendency to rush even when there is no need to, paying attention and focusing is no longer a given. Those people who pace themselves and do one thing at a time, manage stress well, and control technology without it controlling them, are the ones who are in a position to improve their ability to memorize and remember.

Eat well, sleep well, exercise well, and lead an active and healthy lifestyle beyond retirement age, and practice those memory techniques that come easy to you. Never worry about the things you can't do; concentrate on and be thankful for the things that you can do. Take a positive approach to life and you will yield positive results in turn. And finally, don't sweat the small stuff; just go with the flow.

Happy memories.

11 Books referenced in *Boost your memory*

Biech, Elaine. Training for dummies. Hoboken, NJ: For dummies (Wiley), 2005. Print.

Brown, Jeff, Mark Fenske, and Liz Neporent. *The winner's brain: 8 strategies great minds use to achieve success*. Philadelphia, PA: Da Capo Lifelong, 2010. Print.

Gibb, Barry J. *The rough guide to the brain*. London: Rough Guides, 2007. Print.

Kornblatt, Sandra. *A better brain at any age*. San Francisco: Conari Press, 2009. Print.

Maccaro, Janet. *Brain boosting foods.* Lake Mary, Florida: Siloam, 2008. Print.

Medina, John. *Brain rules: 12 principles for surviving and thriving at work, home, and school*. Seattle, Wash.: Pear Press, 2008. Print.

Mort, Herold. *You can have a near perfect-memory*. Raleigh, NC: Contemporary Books, 1982. Print.

Payne, Jesse. *Change your brain change your life (before 25).* Don Mills, Ontario: Harlequin Enterprises Ltd., 2014. Print

Pasinsky, Marie and Jodie Gould. *Beautiful brain, beautiful you: look radiant from the inside out by empowering your mind.* New York: Hyperion, 2011. Print.

Rock, David. *Your brain at work: strategies for overcoming distraction, regaining focus, and working smarter all day long*. New York: Harper Business, 2009. Print.

Roizen, Michael F. and Mehmet Oz .*You on a diet: the owner's manual to waist management*. New York: Free Press, 2006. Print.

Taylor, Harold. *Manage your memory*. Toronto: Harold Taylor Time Consultants Ltd., 1988. Print.

12 About the author

Harold Taylor, CSP**,** CEO of Harold Taylor Time Consultants Ltd., has been speaking, writing and conducting training programs on the topic of effective time management for over 30 years. He has written 20 books, including a Canadian bestseller, *Making Time Work for You.* He has developed over 50 time management products, including the popular *Taylor Planner*, which has sold in 38 countries around the world. He has had over 300 articles accepted for publication.

A past director of the *National Association of Professional Organizers,* Harold Taylor received their *Founder's Award* in 1999 for outstanding contributions to the organizing profession. He received the CSP (Certified Speaking Professional) designation in 1987 from the *National Speakers Association*. In 1998 the *Canadian Association of Professional Speakers* inducted him into the Canadian Speaking Hall of Fame. And in 2001, he received the first *Founder's Award* from the *Professional Organizers in Canada*. The award has been named in his honor.

In 2014, Harold formed an Internet training company, *mindsontime.com*, to conduct mastermind programs, teleseminars and webinars on time management, organizing and leadership – with a focus on the application of recent research findings to increase personal productivity and well-being.

Since 1981, when he incorporated the original time management company, he has personally presented over 2000 workshops, speeches and keynotes on the topic of time and life management.