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USE YOUR HEAD

SYNAPSIA

THE INTERNATIONAL

BRAIN CLUB JOURNAL



Vanda North:
Business Brain Guru and
driving force behind the Buzan Centres

DREAMING ISSUE

EXPERIMENTS IN DREAMING

DREAM FLASHES

CATCHING YOUR DREAMS

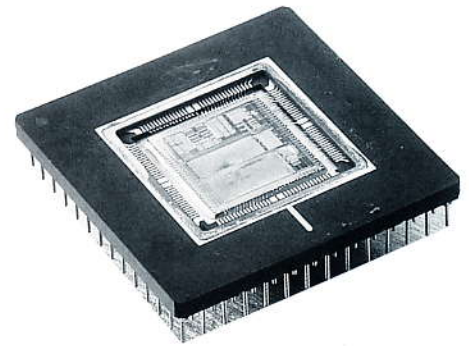
BUSINESS BRAIN

Man v Machine

The ACM Chess Challenge: Garry Kasparov v IBM's Deep Blue

'Kasparov wrestles a machine. Civilisation hangs in the balance.' Charles Krauthammer,
Time Magazine.

'There are different types of thinking, but I would call what Deep Blue does thinking.' Dr
Herbert Simon, winner of the 1978 Nobel Prize for Economics.



At the start of 1996, the attention of the world's media was gripped by an event that seemingly questioned whether human beings were the most intelligent entities on Planet Earth. This book relates the history of a 200-year-old quest; a quest which culminated in the grand chess match between World Champion Garry Kasparov and IBM's Deep Blue. Facing each other were the strongest chessplayer in the history of the game and a computer that could analyse over 500 million moves per second. This match sought to test the truth of Goethe's assertion that chess is the supreme 'touchstone of the intellect'.

International Grandmaster **Raymond Keene** O.B.E. is the chess correspondent of *The Times* and *The Spectator* and is the author of over 100 books on chess.

International Master **Byron Jacobs** is chess correspondent of the *New Statesman and Society* and is a recognised authority on all forms of computer chess.

Tony Buzan is the founder of the Brain Foundation, inventor of the thought-organisational technique of MindMapping® and author of the best-selling *Use Your Head* and *Buzan's Book of Genius* (with Raymond Keene).

The co-authors, along with computer expert David Levy, were pioneers in organising and publicising the world's first Man v Machine Championship. This was the celebrated match in London, 1992, where draughts world champion Dr Marion Tinsley defended his title against the Chinook computer program.

Man v Machine, The ACM Chess Challenge: Garry Kasparov v IBM's Deep Blue is available for £11.99 post free from B. B. Enterprises, 23 Ditchling Rise, Brighton, Sussex BN1 4QL (tel: 01273 686507)

USE YOUR HEAD EDITORIAL

Chip Wars

The recent match between world chess champion Garry Kasparov and IBM's Deep Blue computer created enormous international publicity. This raw man v machine clash seemed to touch a nerve and led to many 'commentary' pieces in the world's media. A number of these seemed to be taking an unduly pessimistic view of the fate of the human mind in an age when computing technology is increasingly encroaching on areas that have hitherto been the exclusive domain of human skill and experience. This is, therefore, a good moment to consider the basic building blocks of the computer and the human brain and to assess how we match up.

Computer Chip

The development of the silicon chip over the last couple of decades has been an advance that has revolutionised the world, making possible such devices as hand-held radios, satellite communications and, of course, the home computer. A computer chip is essentially a small piece of silicon on which a number of electronic devices have been etched to form integrated circuits. In general, chips are composed of transistors which function as switches. Current travels from one end of the device to the other, crossing through a gate which sometimes allows current to pass and sometimes not. This acts as an on/off switch which is necessary for the manipulation of binary systems, the fundamental process underlying all computing.

Early attempts at computing relied on the use of vacuum tubes in electronic equipment. These large, unwieldy devices have now been replaced by silicon chips. This means that the computing technology which originally occupied large rooms and weighed several tons can now be 'integrated' onto a device the size of an ant.

The Brain Cell

By comparison the brain cell is a marvel. The unit is common to all living beings, the brain cell of a bee being the same biological entity as the brain cell of a human. To appreciate the 'power' of the

unit, consider what a mere 2,000 (the estimated number of brain cells in a bee) can do when interlinking with each other: fly a body, navigate, build, fight, see, hear, smell, taste, touch, reproduce, remember, communicate, dance, adjust temperature, harvest, plan and play. The human brain has a million million of these entities and the possibilities are thus endless.

In addition to this obvious meta-computing capacity, each brain cell contains a perfect genetic print-out, which, if its memory is activated, can perfectly clone and sculpt an identical image of the main body in which that cell is located. The computer chip doesn't really stand a chance.

Continuing the comparison further we are obliged to look at what else the two contestants can simultaneously do and store during the time of their match. One minor thing, for example, that the human player can do, is to leave the chair, walk out of the room, ask for a cup of tea on the way, walk into and across the street, enter a car, and drive home. The computer obviously cannot. To accomplish these simple everyday tasks, if transferring them into computer skills, would take a modern super-computer more than the size of the Empire State building and, of course, being that size it could accomplish none of them!

Negotiating space, remembering form, communicating with language, independently providing its own life-support systems, steering a vehicle through space, in which there is random movements of multiple other vehicles, remembering routes in which much of the environment is in constant change, maintaining an entire biological eco-system, etc.

Some scientists are of the opinion that if the most powerful computer were represented by a large doll's house, the human brain by comparison would be a skyscraper reaching from the earth to the moon. For example, Professor Pyotr Anokhin of Moscow University has said: 'There is no limit to the potential of the human brain - it is infinite. Computers have a long haul ahead of them before they can even begin to come close to us.'

The editor welcomes contributions to Use Your Head. Please contact: Byron Jacobs, 23 Ditchling Rise, Brighton, Sussex BN1 4QL, fax 01273 675486 or CompuServe 100045.1752

THE BRAIN CLUB CHARTER

The Brain Club was incorporated on 15 May 1989, and became a registered charity on 23 November 1990. Its official charter states the Club's formal purposes:

- A. To promote research into the study of thought processes, and into the investigation of the mechanics of thinking as manifested in learning, understanding, communication, problem-solving, creativity and decision-making.
- B. To disseminate the results of such research and study.
- C. To promote generally education and training in cognitive processes and techniques.
- D. To develop and exploit new techniques in cognitive processes.

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SYNAPTIC FLASHES

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Man v Machine

The recent match between Garry Kasparov and IBM's Deep Blue computer created more interest than any chess competition since the Kasparov - Short match in London in 1993. At one moment, the IBM World Wide Web site, which was transmitting the moves live, attracted a record number of 1,200 accesses per second. For the final game the number of accesses exceeded five million and caused this route on the information highway to overload and collapse.

Although in difficulties at the start of the match, and at level pegging after four games, Kasparov finally appreciated that the computer is less well orientated in strategic situations than in open tactical ones. He was able to exploit this to win games five and six, and thus seize overall victory by four points to two.

The confrontational element of man v machine struck a resonant chord throughout the international media and the sense of relief when Kasparov finally overcame the machine was palpable, e.g. 'IBM bows to champion who saved dignity of human race.' *The Times* and 'Kasparov wrestles a machine. Civilisation hangs in the balance.' Charles Krauthammer in *Time Magazine*.

A Longer Working Week

Scientists have calculated that over the course of hundreds of millions of years the day has been getting longer. At the start of the dinosaur age, 200m years ago, a day lasted only 23 hours, with 390 days a year, while in the primitive years of animal life, 600m years ago, the day would have lasted only 21 hours, with more than 400 days to a year. The length of the day has risen because the Earth's rate of spin has slowed down, as revealed by tiny sediments of sand and silt preserved in core samples drilled from ancient Australian rock. To counter this phenomenon, the world's time lords at the Central Bureau of the International Earth Rotation Service in Paris decided to add a 'leap second' to the end of 1995. This extra second is designed to keep the Earth's rotation aligned with the superaccurate

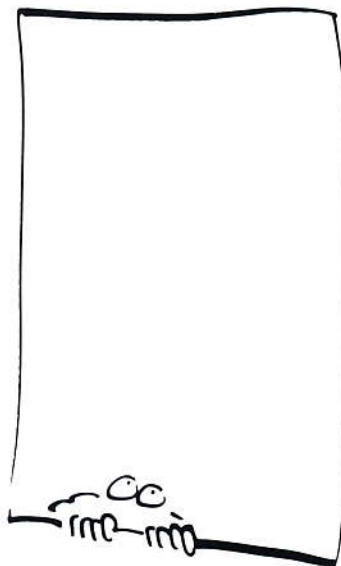
atomic clocks that have determined international time since 1972. It was these atomic clocks that confirmed theories that the Earth's rotation was not constant from year to year, tending to gradually slowdown but speeding up in years with an exceptional number of hurricanes.

Four Cheers for Chantelle

A four-year-old girl, Chantelle Coleman from St Athan, South Glamorgan, has taught herself to speak German fluently enough to have been interviewed on German television. Chantelle has an IQ of 152, seven higher than genius level and 52 more than the average person, and she is the youngest member of Mensa. She first heard the language only a few months ago when she was interviewed by a German magazine, and became fascinated by it, studying it from a phrasebook and tapes. Her parents discovered that she was extremely bright when she was able to recite all her classmates' names in alphabetical order after her first day at nursery school. 'It's a bit worrying - she asks for her breakfast in German every morning,' says her mother, Margaret. Perhaps Chantelle should give her lessons!

Making Glueballs

IBM scientists recently announced the identification of an elusive elementary particle known as the 'glueball' after the largest single calculation in the history of computing. It took two years on one of the world's most powerful supercomputers, the IBM GF11, which was designed specifically for these types of calculations, and required 400 million billion operations. The identification of the glueball is the first time that a particle has been 'discovered' by a computer and helps to resolve a long-standing puzzle in particle physics. Glueballs are accumulations of gluons that are frequently made in atom smashers. They had never previously been recognised as there was no accurate description of them - until now. Their discovery is an important additional confirmation of quantum chromodynamic theory, which had predicted that gluons do interact to form glueballs.



EXPERIMENTS IN DREAMING

Do you make intelligent use of your dreams? Can you modify them? Is there any use for them, or are they just surrealistic movies in your mind? Wilf Hey (UYHCM 854) records some of his personal exploration into dreaming, and outlines how he has learned to involve his conscious mind within them.

It was many years ago that I first experimented with what happened when I had dreams that I recalled for some time the next day. My first observation was that even a clear, active dream, laden with detail, was hard to remember more than ten minutes after awaking. Why was this so?

I formulated several hypotheses and tested them; within a few nights I had determined that I have at least two kinds of temporary memory. (Please excuse the mechanistic metaphors; as a computerist they come readily, even though I know they may be flawed or limited.) One type passes through an association process and becomes assimilated into the network that is my main memory; the other type seems to skip this process, so all but faint wisps of detail quickly fade and do not enter my main (permanent) memory.

There are two challenges to that hypothesis, which would actually suggest an even more strange idea - that I have two barely connected full memories. Those challenges are:

1. That on rare occasions I find myself seeming to continue a dream that was postponed from an earlier occasion; this may suggest that I have a full permanent dream memory as well as the temporary buffer memory that fades as day-to-day consciousness takes hold.

2. That on more than one occasion I have been able to confirm (through dreamlogs, as you will learn later) that a *déjà vu* experience stemmed from a dream; when I realised this, though, I found myself completely incapable of telling whether the dream had occurred the previous night or ten years before. I found it a strange feeling to remember something with not the slightest



impression of time attached to it.

Encouraged by these initial forays into dream experimentation, I tackled what became one of the most extraordinary observations of my dream life. Have you ever found yourself in a dream armed with your own full awareness that it was a dream, and the ability to interact with the dream? I set about finding out what was different about me or other circumstances at the times of these dreams.

The first step was to attempt dreamlogs; keeping pencil and paper by my bedside so that I could record my very waking thoughts, with a view to being able to recall and analyse dreams later. I

have heard of other experimenters having great success with this: it didn't work for me! My initial dreamlogs were completely indecipherable and contained frankly schizoid doodles decorating weird, lifeless landscapes. For several months I entertained the theory I had seen somewhere that the dreaming brain is a madman, safely locked away during the day but temporarily free when the conscious mind drops its vigil.

All this changed one night when I had a new kind of vivid dream; I had encountered a knotty programming problem during the day, and left with it unresolved. I had taken a computer memory dump -

My initial dreamlogs were completely indecipherable and contained frankly schizoid doodles decorating weird, lifeless landscapes.



'The implication of this is that either my dream mind is awake and recording during the day, or that my dream mind has detailed access to my conscious mind. Either way, it means that my memory is eidetic (photographic) although I had never before suspected it!'

several pages of numbers in unpatterned rows and columns which can often be used as a reference model of the state of a computer when a program blew up. During a dream (about three hours into my usual six-hour sleep) I found myself in a well-lit room poring over this selfsame memory dump. Suddenly I found the answer - which required looking at certain specific parts of this listing. I woke up with this answer in my short-term memory and recorded the page number and two hexadecimal memory addresses on the top page of my dreamlog. The next day I tore off that first page and stuffed it into my pocket. Later, in front of the actual memory dump listing on my desk at the office, I was able to confirm that the answer (which I had totally forgotten) could be reconstructed by checking the recorded page number and addresses - which were absolutely correct!

The implication of this is that either my dream mind is awake and recording during the day, or that my dream mind has detailed access to my conscious mind. Either way, it means that my memory is eidetic (photographic) although I had never before suspected it! I am able to store at least several pages of meaningless-looking numbers, as yet unanalysed by me, in a memory that can then use this in the same way we use a reference book!

Almost immediately after this revelation - just a few nights later - I explored a brand new phenomenon. I discovered that if I moved my eyes rapidly from one side to the other while having a conscious dream, I could both extend the perceived length of the dream and enhance its realism (or at least my ability to interact with the dream). With a little practice I found that I could simulate this eye movement simply by spinning - a neat pirouette that I couldn't possibly accomplish in the waking world. More recently I have found that my dream eyes don't have to move; I keep them focused, and then snap my head 360 degrees on completion of one turn of my dream body (the elasticity of my neck is apparently great enough). One turn takes about a quarter of a (perceived) second, and I can do it tirelessly. I know this sounds weird, but I welcome other experimenters to try it when they next find themselves in a conscious dream. After incorporating these fast spins into my dreams I found that dreamlogs became much more readable - and the seemingly morbid images changed to vivid reminders - not of the dream

itself, but of associations. Moreover I found that I was mind-mapping in a primitive way during those few half-awake moments when I finished a dream.

By the way, I also find that with practice I can explore and modify my dreams; first I note that I can even launch a conscious dream now - or turn an ordinary dream into a vivid dream. My one problem at the moment is the consistent belief of my dream self that there is a way to bring physical objects from a dream into reality: in a dream I am constantly annoyed that I have a cultivated resolve to bring back only knowledge, not goods! Secondly I note that my dreams are always in colour and always three-dimensional.

There is apparently no sound at all - or at least I translate sound into a different sense. On occasion I have even conversed with my wife (who is awake, and patently amused at the phenomenon) but when I awake with full memory of the dream, both my words and hers are transformed into something else - often a book or a detailed picture. I have never noticed any regret at the absence of sound. On one occasion my wife played Brahms' *First Symphony* while I slept; I didn't remember hearing anything, but experienced a dream of riding on a train in a marshalling yard. If you listen to the first movement with that in mind, you (like I) may find this a logical translation.

It is difficult to be objective when you are the guinea pig in your own experiments: I am interested to know if my results are repeatable, or too highly personal. I find it interesting that in my conscious dreams I am invariably naked, but unashamed. Telling myself nobody will notice seems to assuage fear. More recently I have noticed that when I intentionally turn a dream into a conscious dream, my dream clothes (if ever they were there) disappear. Nevertheless I have not had libidinous conscious dreams: nudity seems to be unconnected with sex.

I can also confirm that I have dreams about people I know - but they often have completely different faces; sometimes changes are subtle - eye colours, or the face mirrored (that slight mark on the left side of a known face is now on the right side). I have never had any memory of a third person dream: I have always been at least an active observer. However, I am able at will to make myself unnoticed by those around me so that I am effectively just an observer.

Time in my conscious dreams is different in funny ways: cause and effect are less precise, and the flow of time is somewhat erratic. I cannot recall any gaps in time, or flashbacks. Thought-processes (including delving into my memory) seem to function exactly as in the waking world. These observations and experiments have already benefitted me: I have an extra memory resource - more powerfully developed (or less inhibited?) than my own conscious memory; I have an endless source of entertainment; and I am learning more about the functioning of my thought-processes. What more lies in store?

Some of my more recent experiments are directed at answering the following questions:

1. I can 'launch' a dream; I can modify (to a degree) the scenario of a dream; but can I learn to create a scenario to suit my need (or amusement)? How?

2. So far I seem to be 'conscious' only in what are probably REM-sleep dreams (the highest level of real sleep); it is known that we dream at lower levels of sleep. Can I learn to develop consciousness at a lower level of sleep? How?

3. One thing I have been unable to change in a dream: the cast of characters. Why? Can such an ability be cultivated?

4. Until I actually experimented, I would have said (incorrectly) that I had a sense of hearing in my dreamworld. Now I know the lack (and the weird, seamless

compensation my mind makes for this lack). I must ask, am I unusual in this? Some people report that they dream in black and white. Are they correct?

5. My 'dream' memory appears to be in some respects eidetic ('photographic'). Does this indicate that I can (or should) develop an eidetic memory in my conscious persona? Does it indicate that people in general have eidetic powers of memory, but don't realise it? (The Organic study method may be a tool to scrape the surface of such ability.)

6. Quite often in my conscious dreams I have a sudden 'memory' of a previously unremembered dream, representing itself as from 'long ago'. Am I manufacturing these memories, or are they true memories of forgotten dreams? Are they dreams from a deeper state of sleep? Or dreams from earlier that night?

7. I know there are sleep researchers - and plenty of dream 'symbol' interpreters. My own experience with the 'symbols' (at least from popular books) seems to warrant their total dismissal from my consideration.

But how would I make useful contact with sleep researchers? Would they be interested? Would they provide me with other useful insights?

Are there other morpheonauts in the Use Your Head Club? What are the results of your own explorations? Please write to me with your experiences c/o *Use Your Head* magazine.

Wilf's Dreaming Quiz

1. What does the date January 15th have to do with dreaming? (Do you need a clue? Think of an opus from a Swedish singing group!)
2. When, in literature, did the consideration of dreaming actually prevent a suicide?
3. What is the most commercially successful dream? Is it Jewish or Christian, we have to wonder!
4. In 1946 H G Wells unkindly remarked (in *The Happy Turning*) that 'Religions are such stuff as dreams are made of.' This was an adaptation of an earlier quotation: can you identify its source?
5. One famous man suffered a little nagging from his ever-loving wife when she said 'I have suffered many things this day in a dream because of him.' Who was the husband? Who was the man who caused the bad dreams? What did she urge her husband to do?
6. Many West End musicals seem to feature a dream in a principal song. One example is 'Climb Every Mountain' (from 'The Sound of Music') which ends '...till you find your dream.' Can you think of two more recent examples of dream songs from among the musicals?
7. Porlock is a little town in Somerset with a less than enviable connection with dreaming. Can you identify that connection?

Answers on page 31.

Test out your knowledge of dreaming with Wilf's Dreaming Quiz. If you dream up the answers, remember to note them down in your dream log!

DREAM FLASHES

Why do we Dream?

Scientists have different views as to why we actually dream. Some believe that they help consolidate the memories and learning that took place the previous day. There is evidence that you are much more likely to be able to recall lists and skills twenty-four hours later, after uninterrupted sleep, than eight hours later without sleep or twenty-four hours later with interrupted sleep. Dr Avi Karni, a neuroscientist at the Weizmann Institute of Science in Rehovot, Israel, believes that 'Rapid Eye Movement' (REM) sleep may be an important mechanism to make sure you don't lose important mechanism to make sure you don't lose information learned over the latter part of the day, especially for 'how to' or procedural memory. The natural corollary of this is that if you suffer from sleep disruption or deprivation you may suffer a general decline not just in memory, but in overall mental performance. Other dream researchers see dreams as a means for allowing busy brain cells to recharge their depleted stocks of transmitter chemicals, but there is little evidence so far to support Freud's view of dreams as repressed wishes that have not been fulfilled.

Interpreting Your Dreams

From where do dreams receive their stimulus? The most obvious source is our own personal experience, but there is some evidence that our dreams are strongly influenced by what we see on screen. 'The images that come across to us in television and movies provide very powerful stimuli for our dreams,' says psychologist Montague Ullman, co-author of *Working with Dreams* and founder of the Dream Lab at Maimonides Hospital in Brooklyn. 'When those images carry personal meaning,' he says, 'there's no question that they find their way into our dream scenarios.'

Although their meaning may vary from individual to individual, some researchers believe that common symbols appear in

our dreams. By learning to recognise such familiar symbols and the concepts that tend to be associated with them, we can more easily interpret the meaning of our dreams and better understand their relevance to our lives.

According to dream psychologist Gayle Delaney, those who dream of *nuclear war* may be undergoing a major transformation in their lives: 'Nuclear war is something people have been dreaming about since 1945. Those who think these dreams are literally about nuclear war are taking a superficial approach. It's far more likely that such dreams represent a situation that feels like the end of the world to the dreamer, such as the loss of a mate for an adult or the divorce of the parents for a child.'

Psychiatrist Loma Flowers claims that a dream about *Cold War Russia* represents repression in a close personal relationship, including self-repression.

If *Darth Vader* appears in your dreams you may be feeling that you are hiding behind a mask.

Some dreamers see *Prince Charles* in their dreams, and usually this represents an rigid authority figure who withholds affection from others; while *Princess Di* may represent an isolated and unhappy person despite an outward image of popularity and success (although a few years ago she would have instead been simply a glamorous and attractive figure).

My personal 'dream' (which may well be in tatters by the time you read this piece!) is that Wimbledon will go all the way to Wembley this year in the FA Cup. After watching Wimbledon equalise in the last minute of extra time last Saturday (17th February), I had a lucid dream about Joe Kinnear, the Wimbledon manager. Unfortunately it wasn't so vivid that I can remember whether Wimbledon actually won the cup or not!

Dreams for Sale

Have you ever wished you could take control of your dreams? In America you

**Why do we dream?
What do our dreams
mean?
How can our understanding
of dreams be improved?
Andrew Kinsman
explores this
fascinating twilight
zone.**

can now buy, for a cool \$999, something called a DreamLight which claims to be able to help you experience lucid dreams, that is dreams that you know *at the time* are dreams. In a lucid dream your self-awareness changes the nature of the dream, making it a striking imitation of waking life and taking you to the point of elation or despair.

Steve LaBerge's DreamLight apparently tells your brain when you are dreaming. It is a special mask containing a computer that detects REM and alerts you to this by flashing lights that then appear in your dream. Armed with the knowledge that you are dreaming you can then direct the dream with full awareness. For those of you with lesser resources, a device known as the DreamLink is also being marketed. For \$195 this will simply give you cues as to when you expect to be dreaming.

A similar product went on sale in Britain last year. Dr Keith Hearne's Dream Machine costs in the region of £200 to £250. Dr Hearne worked for many years at the Medical Research Council, studying the role of dreams in consolidating memories, before setting up his own research organisation in 1987. It was there that he developed his Dream Machine because 'I believe in the mentalistic universe, half of which is at present shut down to us. We spend approximately two hours - 25 per cent of each night - dreaming. This adds up to six years of brilliant creation over a lifetime, which we throw away and ignore instead of using it to enhance our lives.' Since Beethoven and Mozart recomposed music they had heard in their dreams and Robert Louis Stevenson dreamed the story of Dr Jekyll and Mr Hyde as a complete work, Dr Hearne may have a point. Indeed, Einstein is reputed to have remarked that creative scientists are the ones with access to their dreams, the implication being that in order to innovate the scientist, like anyone else, must break the grip on his imagination that our powers of logical-seeming story-telling impose. We must be willing to subvert the conventional wisdom on which our everyday competence depends, letting free association reign.

The Dream Machine works in a different way to the DreamLight, monitoring the pattern of your breathing rather than eye movements in order to detect dreams. When an REM period is detected an alarm, in the form of four electric impulses to the wrist, alerts the sleeper to

the fact they are dreaming and without waking them up. As soon as the dream is finished and before it has faded, a second alarm wakes up the dreamer so that he or she can write it down. After several months' practice, dreamers are able to take complete control of their dreams, becoming the 'director' of a dream rather than a mere 'spectator', and they may eventually be able to achieve lucid dreams without use of the Dream Machine. However, some scientists are less enthusiastic about lucid dream technology, warning that Nature may not have intended dreams to be recalled in a systematic fashion: 'It is better to dream peacefully and then forget them. They are a mish-mash of the day's events and are there just to keep your brain entertained,' says Professor Jim Horne of Loughborough's sleep research unit.

The School of Dreams

Americans can also study their dreams in the more formal surroundings of the Delaney & Flowers Dream and Consciousness Center in San Francisco. This college was founded in 1981 to train people in problem solving and the development of new ideas through a practical understanding of dreams. Students study common dream themes and interpretive techniques and learn how to focus on a problem the night before so that the following morning they will wake up with a solution. Five-day workshops cost upwards of \$600, while those unable to attend a course can call a 24-hour premium rate telephone hotline for an instant interpretation of their latest dream.

The Nightmare Scenario

Do you suffer from nightmares? Well, you are not alone. According to research by James Wood and Richard Bootzin of the University of Arizona, nearly everyone has nightmares, particularly young adults and those under stress. Wood and Bootzin asked 220 undergraduates to keep a log of their dreams for two weeks. Their conclusions were that the average student has 24 nightmares a year, and that in a state of anxiety you are much more likely to remember your dreams. In fact, during particularly stressful periods you are twice as likely to experience nightmares. However, there is still plenty of scope for research in this area: 'There have almost been fewer studies on nightmares than sequels about the ones on Elm Street,' quips Wood.

Dreaming has inspired many scientific thoughts and literary quotes. Here are a sample:

'All men dream: but not equally. Those who dream by night in the dusty recesses of their minds wake in the day to find that it was vanity: but the dreamers of the day are dangerous men, for they may act their dream with open eyes, to make it possible.' T. E. Lawrence

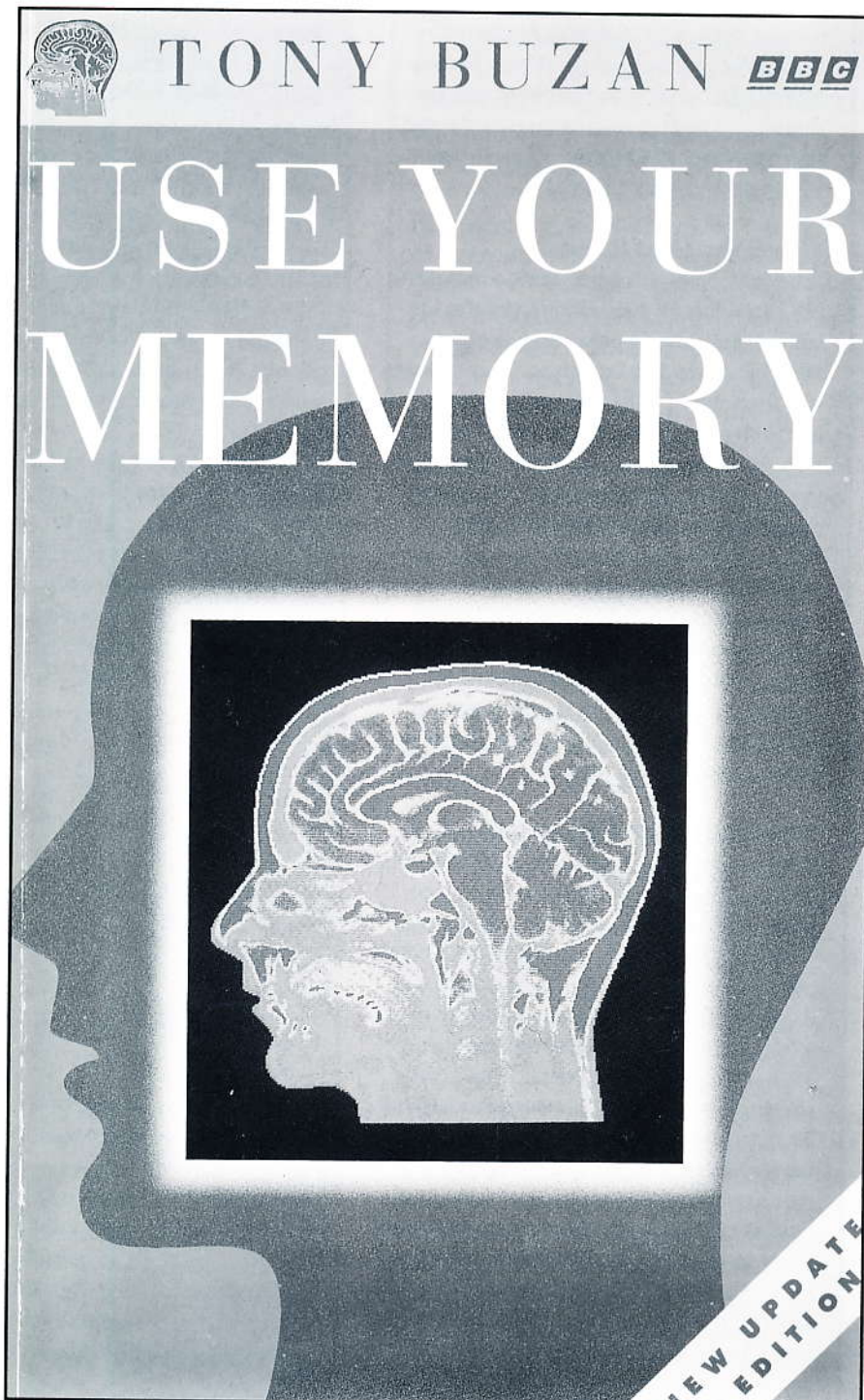
'Find out all about dreams and you will find all about insanity.' John Hughlings Jackson (the 'father' of British neurology)

'Let us learn to dream gentlemen, then perhaps we find a truth.' Frederich August Kekulé (the man who discovered the structure of the benzene ring in a dream - see *Use Your Head* magazine Vol 3 No 4)

'There is strong evidence that dogs have pleasant and unpleasant dreams, and it seems likely that the greater the similarity in brain structure, the greater the similarity in affective experience.' *Oxford Companion to the Mind*

CATCHING YOUR DREAMS

In this extract from his best-selling book *Use Your Memory*, Tony Buzan (UYHCM 1) shows how you can use your dreams to unleash your creative potential.



Standard ability to remember dreams varies enormously from individual to individual. Some people, in fact, have such bad memories for their dreams that they sincerely believe that they are non-dreamers. This is not the case, for research during the past twenty years has shown that every human being has regular periods throughout the night during which dreaming takes place. This is evidenced by Rapid Eye Movement, in which the eyelids flicker and flutter, and occasionally the entire body twitches, as the body internally 'sees' and 'moves' with the imaginary story. If you have a cat or a dog, you may have noticed this kind of activity while it sleeps, for most higher mammals also dream.

The first step in the memorisation of your dreams is the actual retrieval of the dream itself. You can accomplish this by 'setting' your mind just before you go to sleep. As you begin to drift off, gently and firmly repeat to yourself 'I will remember my dream. I will remember my dream.' This will 'programme' your brain to give priority when you awake to the recall of your dream. It may take as many as three weeks before you 'catch' your first one, but the process is infallible.

Once you have caught a dream, you enter the second stage of dream memorisation. This is the tricky and 'dangerous' moment, for if you become too excited by the fact you have actually caught one, you will lose it. This is because, for this type of memorisation, your brain needs to remain, for a while, in a *non-excited* state. You must learn to maintain an almost meditational calm, gently reviewing the main elements of the dream. You then very gently select two or three of the Key Main Images from the dream, and attach these, using the Memory Principles outlined in *Use Your Memory* (which are dreamlike in themselves) through one of

your basic Peg Systems.

Let's imagine, for example, that you had dreamed that you were an Eskimo stranded on an ice-floe at the North Pole and that you were writing, with gigantic felt-tipped pens, messages for help in the northern sky, forming multicoloured words that looked like the aurora borealis. For this you would need only two items from the Peg System. Take, for example, the Alphabet System. In this you would imagine that on the ice-floe with you was a gigantic and hairy ape shivering exaggeratedly in the cold with you and thumping his chest to keep warm as an enormous bee buzzed in and out of the multicoloured images you were writing in the sky (see illustration). Note that although the Alphabet System Image Word for the letter A is *ace*, it is permissible, as here, to use an alternative of your own choice.

Attaching the Major Dream Images to your Major Key Word System Memory Images in this way allows you to easily span the different brain-wave states in which you find yourself when asleep, when waking and when full awake, thus enabling you to remember that important and very useful part of your subconscious life.

Numerous studies completed on people who have started to remember their dreams show that, over a period of months, they become more calm, more motivated, more colourful, more humorous, more imaginative, more creative, and far better able to remember. All of this is not surprising, for our unconscious dream world is a constant playground for the right side of the brain, where all of the Memory Principles are practised to perfection. Getting in touch with these at the conscious level encourages all connected skills to improve automatically.

If, as many people do, you become interested in this area of self-exploration and improvement, it is useful to keep a dream diary in Key Memory Word and Key Memory Image Mind Map form. This diary will give you constant practice in all the skills mentioned and will become an increasingly useful tool in your overall self-development. After a little practice you may well find yourself both appreciating and creating literature and art at levels you had not previ-

ously explored. For example, Edgar Allan Poe first remembered and then used the more nightmarish of his dreams as the basis for his short horror stories. Similarly, Salvador Dali, the surrealist artist, publicly stated that many of his paintings were reproductions of perfectly remembered images from his dreams.



INTELLIGENCE ABOUT INTELLIGENCE

Netting Your Dreams

'Western culture does not regard dreams as especially important, rather it regards getting out of the bed in time as a prevalent survival factor.'

The Internet and World Wide Web are very handy places for locating information on almost any subject. One of the most useful features is the Frequently Asked Question list (usually known as the faq). This takes the form of a question and answer piece which, as you might imagine, attempts to answer 'frequently asked questions'. Many people (known in net-speak as 'lurkers') read newsgroups all the time without ever posting any items. However, if you are intending to post queries to a newsgroup, it is usually a good idea to check out the Faq first. Your question may have already been asked many times previously and, if so, the answer will probably be on the Faq.

Faqs are often attached to web sites or posted on newsgroups. Material on newsgroups does not remain permanently but, typically, has a shelf-life of a couple of weeks. Therefore a Faq tends to be re-posted at regular intervals for the benefit of new visitors to the group.

As an example of how general information can be extracted off the net and web, the following article is based on material collated from a dreaming web site Faq.

Q. Does everybody dream? Why is it that I don't remember my dreams?

A. Everybody dreams. Not only all humans, but in fact all mammals are shown to have REM sleep, which is associated with dreams. It is a normal and necessary function of the body (though the details, especially the exact reason why it is important, are unknown). So if you think you don't dream you probably just don't remember.

People vary greatly in how much they remember of their dreams. The perhaps most important reason why people forget their dreams is that they don't care. Western culture does not regard dreams as especially important, rather it regards getting out of the bed in time as a prevalent survival factor. This is bad in two respects as most dreams occur at the end of the sleeping cycle and are often interrupted, and the necessity of getting up fast and keeping up with the schedule

occupies peoples' minds and prevents them from thinking about their dreams in the morning.

Dream recall can be trained. Try to think over everything you have dreamed for some time before getting up and write it down soon afterwards.

Q. How do external stimuli affect my dreams?

A. Sensual 'input' while sleeping is incorporated into dreams. Most notably, while sleeping, you hear as well as while waking - the ears are never turned off. This leads to the consequence that what you hear while sleeping, you'll hear in your dreams. The sound is always coming from 'somewhere'. Common experiences of this kind are a telephone ringing or music from the radio. The same holds for the other senses. Note that it is not important how loud some noise is to get noticed while sleeping - even an otherwise unnoticed sound, like a mouse running over your floor, can wake you up if it is uncommon or otherwise alarming to you - on the other hand, you can get accustomed to high levels of noise, like construction work nearby. (What definitely will wake you up is someone knocking at your window if you live at the 10th floor.)

It is interesting that you can hear exactly what is going on, but will forget it on waking up along with forgetting the rest of your dream. This includes things such as news broadcast heard on the radio - after waking up, you have forgotten it. It is like you have dreamed the news broadcast as well - but distinguishing this fact is a good clue to lucid dreaming and the way 'lucidity inducing devices' work.

Q. How long do dreams last?

A. REM sleep periods, and therefore dreams, last typically in the range of 5 to 45 minutes. Often, the subjective time spent in a dream is much longer. One possible explanation for this time-stretch effect is that dreams are combined from pieces that have their own different setting in time. You first dream of something that occurred a year ago, then - following - of something that occurred just recently,

mix them up a bit and are left with the remembrance of a dream that lasted a year.

But experiments suggest that dreamed actions run in 'real time' - what you do in your dream takes exactly this time to dream. With external influences like the radio running in the morning, you have both the real time in which you hear something and - sometimes - the feeling that it lasted considerably longer. Anyway, time is one of the perceptions that are heavily distorted in dreams.

Q. Why do I keep dreaming the same thing over and over?

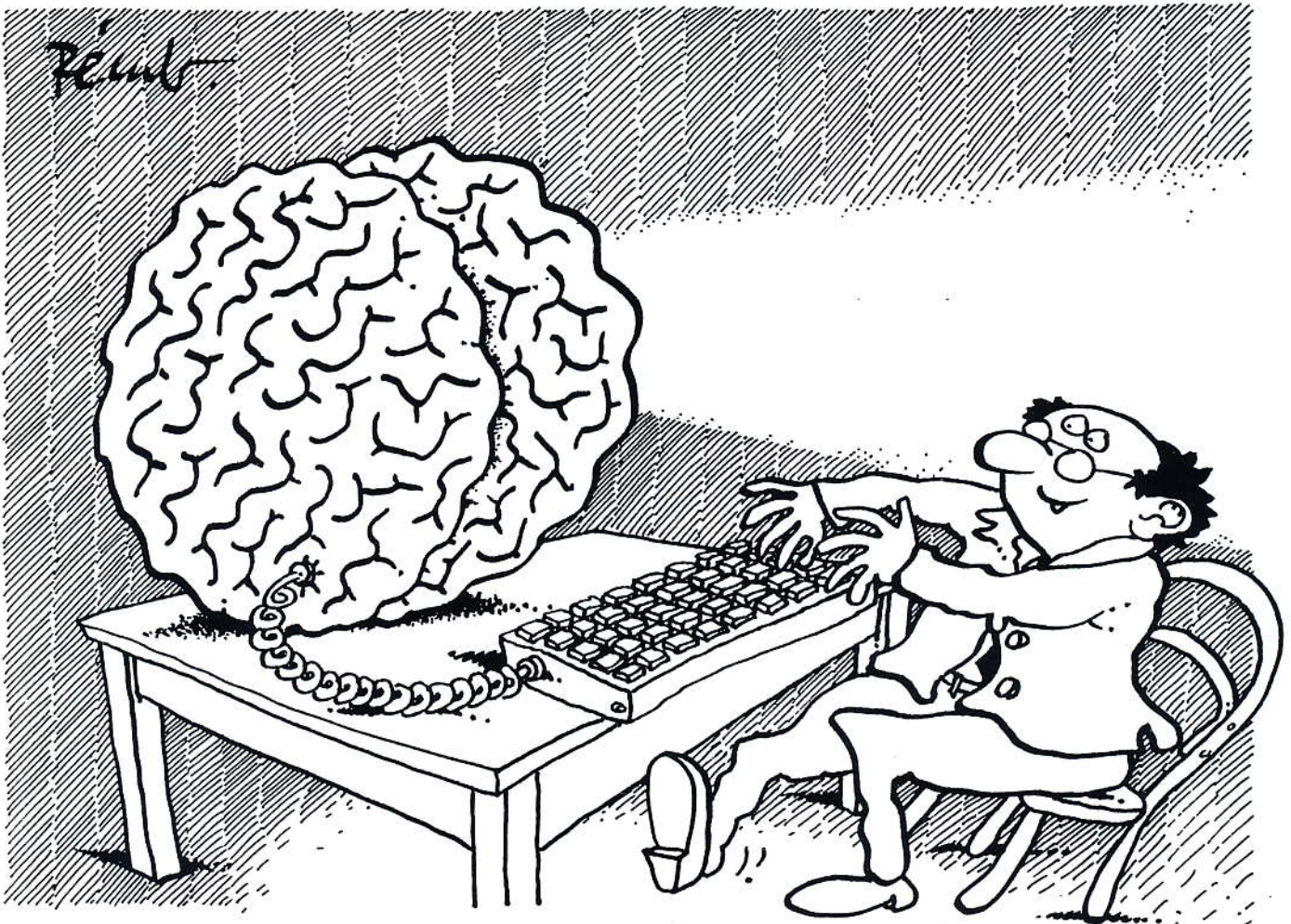
A. Recurrent dreams are a sign of thoughts that occupy the dreamer much, consciously or unconsciously. Such thoughts have influence on the dreams and are often remembered better than 'random' dreams since you know of their importance. Sometimes those dreams are unpleasant, a sign or symbol of some conflict situation that you still have to overcome. Ask yourself what the dream signifies - probably you can interpret it better than anybody else, since you are the one who knows yourself best.

Of course, there are also nice recurring dreams. Some people build their own dream world which they explore, meeting friends there etc. Some claim they are in fact entering a different world, others attribute this to remembrances of old dreams creating new ones. At first, it's up to yourself to believe a reason or another. For either one, probably the most important thing is that you - again - take these dreams as valuable for looking at yourself.

Q. Do dreams predict the future?

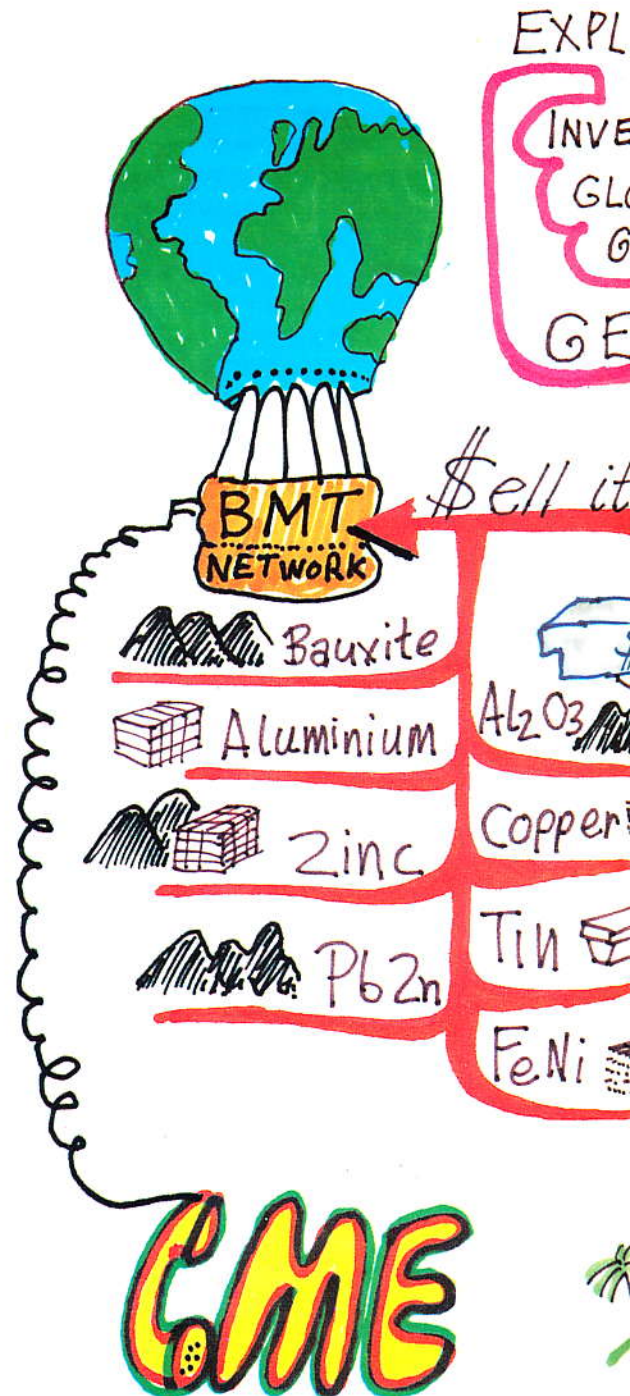
A. This, like many other things commonly referred to as 'paranormal', is unknown. There is much evidence against it and it would contradict the laws of nature as recognised by scientists today. (Any information getting from future to past would have to break the speed of light, which is impossible. More on this can be found in the sci.physics Faq postings.) However, many people insist on having experienced 'déjà vu' like situations where they came into a setting they had already dreamed of. Could they prove it? Probably not, but this fact alone doesn't invalidate the experiences. (Proving a subjective experience *wrong* is impossible.)

Source: <http://www.cis.ohio-state.edu/hypertext/faq/usenet/dreams-faq/top.html>



BUSINESS BRAIN

In this issue Vanda North looks at the 'real' impact of Radiant Thinking training for those with whom she has worked. What happens to the newly developed Mental Literacy skills as people return to a non-Mentally Literate world? Billiton's Ros Casares interviewed several of the people who attended Vanda's classes, this article was the result:



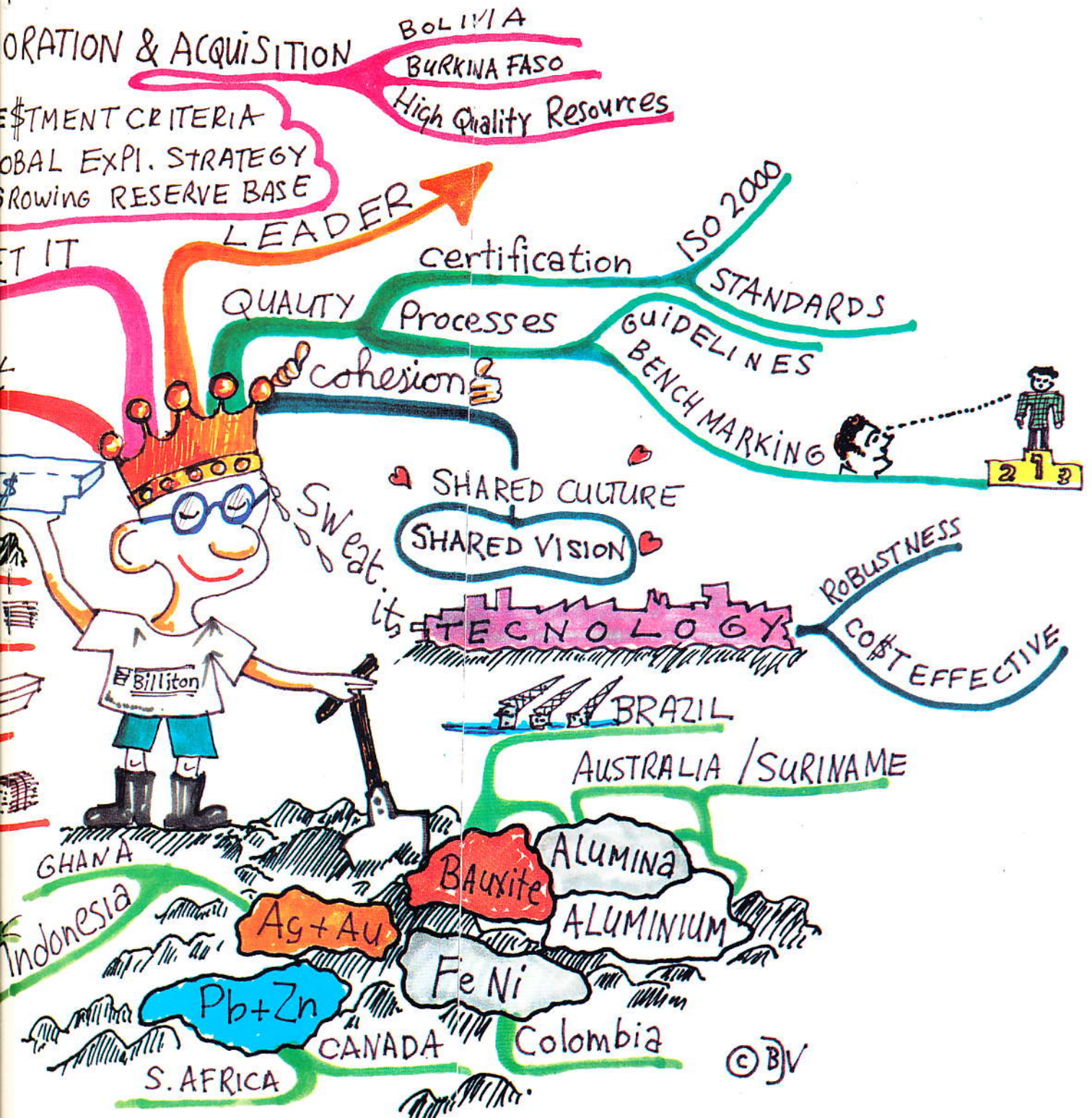
Awakening a Sleeping Giant

Your brain is a sleeping giant. Its limits are unlimited.

While man has known for centuries that he has a brain, it is only in the last 25 years that we have discovered how the brain actually works. Recent research has revealed the human brain to be much more powerful than was once thought. In fact most of us use as little as 1 per cent of our conscious capacity - so what are we doing about the other 99 percent?

Learning to Learn

'Teaching people to think, create, remember, concentrate, plan and communicate before they embark on any other training guarantees that all the subsequent training is absorbed and applied appropriately and at least two times more effectively than on average,' says Vanda North of Buzan Centres, who has enthusiastically put most of the 60 participants from Billiton companies through their paces during courses to improve their



'However it is now known, and increasingly recognised in schools and other places of education, that mental images and drawings can double your power of retention and help the process of continuous learning.'

mental performance.

Organised by the Billiton training department, in Leidschendam, these Buzan training sessions force participants to go back to basics, to understand how their mind works and how to use it to the best advantage.

Vanda North explains: 'Your brain has two main upper parts, or cortices, which are linked by a fantastically complex network of nerve fibres. Each cortex deals dominantly with different types of mental activity. In most people the left cortex, or 'left brain', deals with logic, words, reasoning, number, linearity, and analysis - the so-called 'academic' activities. And the right cortex, or 'right brain', deals with rhythm, images and imagination, colour, day-dreaming, face recognition, and pattern or map recognition.

'When you were at school, it was most probable that greater emphasis was given to left brain thinking. If you were prone to doodle or day-dream at school, you were scorned for not paying attention rather than encouraged to develop the skills of your right brain, which we now realise are distributed throughout the cerebral cortex.

'However it is now known, and increasingly recognised in schools and other places of education, that mental images and drawings can double your power of retention and help the process of continuous learning.

'All types of brain activity are important and should be connected with each other. Isolated connections are cul-de-sacs that lead nowhere. They are produced and closed off by linear thinking habits. These blind pathways can be opened up and connected to each other by activities that stimulate the whole brain.'

One of the most dramatic innovations in the pursuit of mental literacy is the Mind Map. Tony Buzan, the originator of Mind Maps, discovered this intellectual tool as a result of an intensive study of memory and a review of the latest research on the left and right hemisphere of the human brain.

Mind Mapping is an activity which prompts each of the two parts of the upper brain to interact with each other. The result is higher quality of thought. The Mind Map is a learning tool and technique that incorporates the traditional mental tools of words, numbers, lines, lists and sequence, with an additional set of mental tools that are especially powerful for

improving memory and creative thinking - image, colour, dimension, space and association, or linking.

Using the Mind Map technique immediately doubles thinking power. It can be used where any traditional note-taking system is used. It is especially useful in creative thinking, speech preparation, speech presentation, note-taking, strategic planning, decision-making, problem solving and training at all levels.

A Mind Map is often colourful, dramatic and highly visual in format. We all have basic doodling, symbol making and outlining skills, and these can be incorporated in the Mind Maps we create. They can be used to help assimilate and respond to presentations, as memory and review devices, as well as communication tools. They give a clear picture of the overall structure of the information and also allow the user to see the connections. You can add to Mind Maps as ideas develop. It is essentially a form of thought organisation and note-taking, identifying the key elements of a problem or discussion and thus improving the brain's ability to see all the possibilities and make fast, highly effective decisions. They help the brain get a firm grasp of any new subject, idea or string of information that is presented to it. It uses the skill of your whole brain, thereby accessing the other 90 per cent!

Putting it into Practice

Reading through the comments on the course evaluation sheets, one would assume that everyone was ready to rush out and change their way of working. But did they? We spoke to a number of participants several months after they were introduced to these new skills. Vanda North adds her comments to their response.

Rob Snepvangers (General Manager Billiton Metals, Canada Inc.): 'I still use the techniques when I want to assemble all aspects of a problem or a programme in order to discover, or put together, the proper logic. I keep a file of my Mind Maps, and find that looking at them again can be quite useful. However, I find the technique not easily adaptable to day to day matters. Many of the computer programmes we use somehow force you away from Mind Mapping into square or linear thinking.'

Vanda North: There are programs which allow Radiant Thinking to occur on a computer too!

Nick Crase (Billiton Australia): 'I was

already familiar with all sorts of mapping techniques - from the electronic microscope to the global satellite systems, but what was this thing called Mind Mapping? Also, what were these strange doodles of many colours and shapes being prepared by people when they should have been concentrating on taking notes? Was there a link here? Surely not - everyone knows that doodling is a waste of time.

'After the course I found that Mind Mapping links these things together and provides a powerful, useful tool. I now use the technique in many aspects of my job (and lapse back into linear note-taking as well). I have found that planning meetings in advance using Mind Mapping, recording the progress of a meeting, reviewing action points and following these up has been enhanced.

'One of the great advantages is that you can return to your Mind Map and add new ideas, re-evaluate alternative strategies and tactics or options and continue to develop previously captured ideas. If your colleagues are also familiar with the technique you can pass a simple, quick map to them to enable their ideas to be incorporated into any evaluation.

'I would not say that I use the Mind Mapping techniques for everything that I do, but the ideas and concepts behind the technique can be applied to anything you

wish to put your mind to.'

Paul Everard (BIM): 'I use mind mapping on a daily basis and probably of all the notes and jottings I make in the course of a week, well over half will be in this form. However, I do just use an ordinary pencil and not colours.

'On speed-reading - I practised mainly on newspapers and magazines and find it only partially effective.'

Vanda North: Your pencil is fine for notes and jottings - colour and additional beauty only become necessary if you want your Mind Map to be memorable.

Hans Verschuur (BIM): 'I used Mind Mapping for quite some time after I was introduced to the technique, but I found that after a while I returned to the more traditional, linear, way of making notes. For example, in some formal meetings I found that Mind Mapping did not give sufficient detail. However, for more informal meetings the Mind Map does work in ordering one's thoughts and general understanding. Maybe I am too much of an engineer and my left lobe (or was it the right one) has not developed sufficiently to appreciate what appears to be sometimes chaotic Mind Maps.

'I still make an effort to use the speed-reading technique for technical articles. But also here with time the skill seems to fade away.'

SUMMARY

Two areas are particularly important for the success of any training on Mental Literacy:

- 1) Your awareness/mind set/preparation as you enter the course.
 - What are your expectations?
 - What is your emotional/physical/intellectual state?
 - Are you prepared/rushed/afraid?
 - What have you heard/been told/inferred?
- 2) The support/integration/application as you return to your work/life.
 - Share your learning with colleagues/friends.
 - Have blank paper and pens, with which to Mind Map.
 - Practise and build up your skills.
 - Problem solve with your Intellectual Coach to get over any obstacles.
 - Support group to assist the new habit.
 - Join/create a Business Brain Club for all of the above!

For further details please contact Vanda North at:

Buzan Centres Ltd, 37 Waterloo Road, Bournemouth BH9 1BD.
Tel: 01202 533593.

BUZAN CENTRES



Could you identify the year in question from these clues?

Buzan Centres
...make the most of your mind

- The House of Commons voted to allow its proceedings to be televised.
- GCSE examinations replaced CSE and Ordinary Levels.
- Peter Wright's *Spycatcher* trial in Australia added the euphemism 'economical with the truth' to everyday parlance.
- Mikhail Gorbachev was elected President of the USSR.
- Salman Rushdie published the controversial *Satanic Verses*

Well? It was 1988, the year in which Vanda North created the Buzan Centres.

Tony Buzan had established an extraordinary international niche: writing hugely successful books for a range of publishers, and offering firsthand experiences of his teaching revolution to conference audiences around the world. Mind Mapping®, exercising the memory, and the sheer excitement of learning had been demonstrated to reading and listening audiences from the Pacific Rim to British schools and universities.

However, there was still a wide-spread desire to learn more about 'Mental Literacy'. Tony was now such a prolific and long-term author that it was impossible to find any one book shop which stocked every Buzan title. There were numerous requests from organisations and individuals to have further teaching in the Buzan methods, to access the manual which teaches how to reach the full potential of each and every intellect.

Vanda North stepped in to spearhead the Buzan Centres. Bournemouth was the first base, and was rapidly followed by an independent organisation of the same name in Palm Beach, Florida. These Centres exist to respond to the constant demands from all over the world for unlimited opportunities to benefit from Tony's creative skills.

No other organisation or institution offers these services: ***a one-stop shop for your mind and your brain***. In this country, you will find Adele, Sue, Mick and Pauline ready to assist you throughout the year: orchestrating the mail-order division of Tony's books, videos, audio cassettes and software while Vanda North trains the instructors to teach the concepts wherever they are in demand.

How can Adele and her team help you? Do you want a priority order on one of Tony's over-subscribed new publications? Perhaps you are looking for an additional copy of one of his earlier works which a friend borrowed, and never quite returned? Do you want training: either as an extension of your working experience or as a benefit to your workplace and family? A select group of trainers have passed the exacting and demanding criteria set by Vanda and Adele, and are ready to help in either the educational or commercial sector. Whatever your interest, the Buzan Centres are there for you, ensuring that you receive all possible assistance.

Vanda's commitments keep her travelling for much of the year, but you are always welcome to contact Adele Foulkes, Chief Executive, on Tel: (01202) 533593.

Welcome to the Buzan Centres. Your one-stop shop is ready to help at any time, in every way. Contact us today to let us see how we can help you to ***make the most of your mind***.

...you can, with Buzan...

ANIMAL INTELLIGENCE

The Ant Hill Mob

'No ant has compared the two trails, but collectively they've used a very simple rule and they've used positive feedback.'

Most of us have, at some time, watched with fascination as a group of ants work together to bring food back to their nest. We have observed how the 'scout' ant heads the search, leaving behind a faint trail of pheromones for its companions to follow, strengthening the trail with their own pheromones. Although the scout moves randomly, somehow the other ants seem to collectively 'know' the shortest path. How is this so? Mathematicians and physicists have been researching this problem.

The consensus view is that ants follow the straightest path by means of a sequence of successive improvements. The random path taken by the scout is made more efficient by the secondary wave of

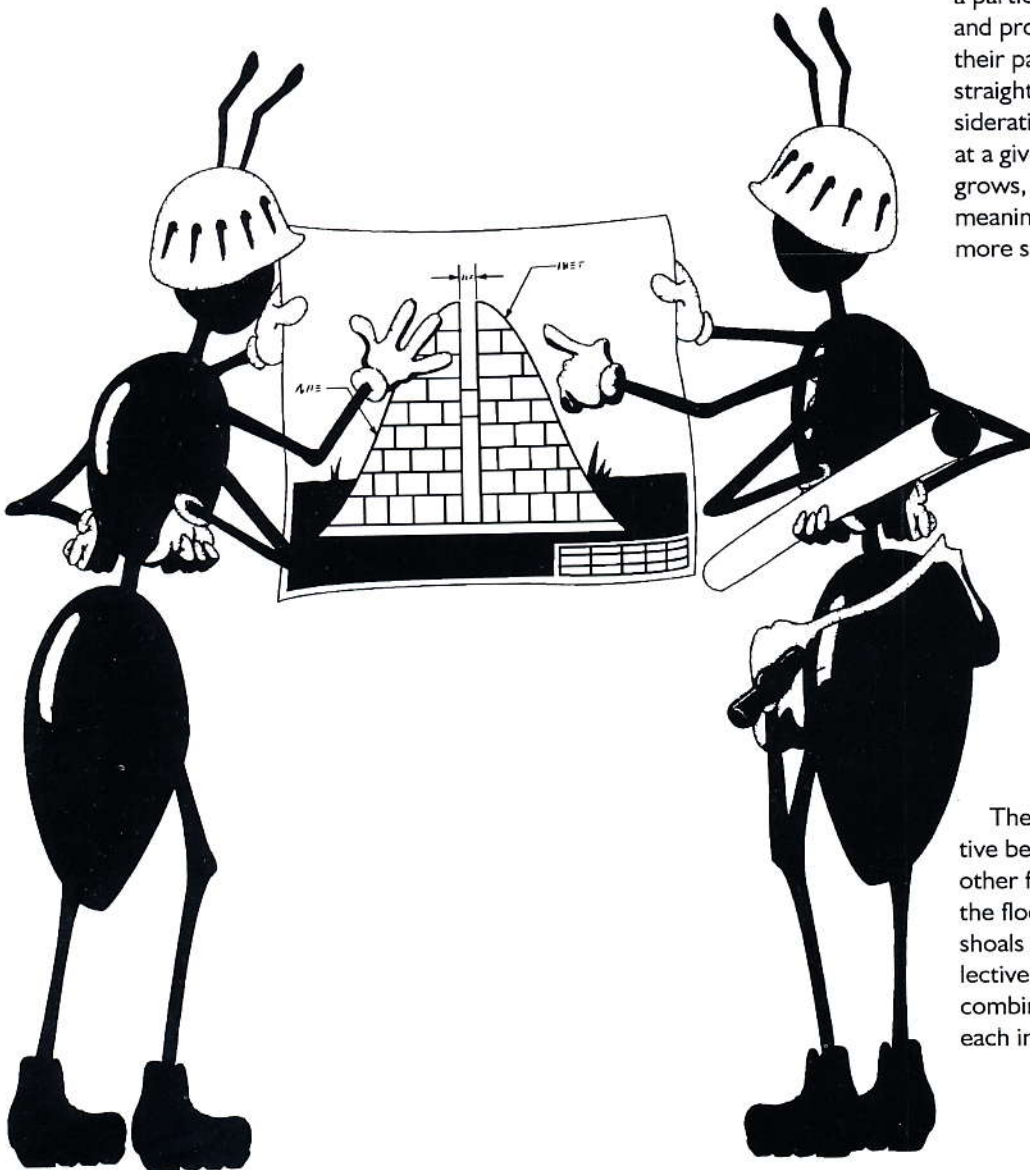
ants. There is evidence from computer simulations that ants that are forced to change direction sharply either perform a U-turn or keep going but lay down less pheromone. If this is the case, it is easy to see that there will be a gradual build-up of pheromone on the straighter tracks for successive waves of ants to follow.

Physicist Richard Feynman's explanation is similar. He believes that ants trying to follow the original path tend to overshoot at corners and wander off randomly until they meet the path again. The overall outcome of this is that sharp bends are eliminated and pheromone accumulates on the straightest course.

Mathematician Alfred Bruckstein of Technion University in Haifa, Israel, set up a particular method of Feynman's concept and proved that as ants follow each other, their paths become straighter and straighter. His theorem is based on consideration of the angles that each ant turns at a given time. As the number of trips grows, the angle tends towards zero, meaning that the path becomes ever more straight.

A similar phenomenon occurs if ants are given the choice of two routes to the same food source: they will gradually tend towards the shorter one. The pheromone trail will become stronger here as these ants are able to make more trips than their counterparts on the other trail, and ultimately all the ants will switch trails. Zoologist Dr Simon Goss finds the collective behaviour of the ants intriguing: 'No ant has compared the two trails, but collectively they've used a very simple rule and they've used positive feedback.'

These elegant explanations of collective behaviour may have implications for other forms of animal behaviour, such as the flocking of birds or movements of shoals of fish. All of these seemingly collective actions may arise simply from the combination of simple rules followed by each individual.



AMAZING MEMORY STORIES

Using Your Memory to get out of Jail!

In the *Book of Genius*, Tony Buzan tells the story of Euripides, one of the most famous writers of Greek tragedy. In the 5th century BC Euripides won no less than five laurels for drama at the festival of Dionysus, the Greek god of Wine and Creativity. He wrote his dramas late in the age of Pericles, a time when the traditional values and beliefs of the Greek world were being eroded. Euripides' works reflected this growing uncertainty. The Gods as reconcilers, as represented by Aeschylus, were losing their hold on the minds of the Greeks, and attention was turning towards purely human concerns, rife with doubt, questioning, and complexity. Sophocles, who admired Euripides' work, as did Socrates, said: 'I paint men as they ought to be. Euripides paints men as they are.'

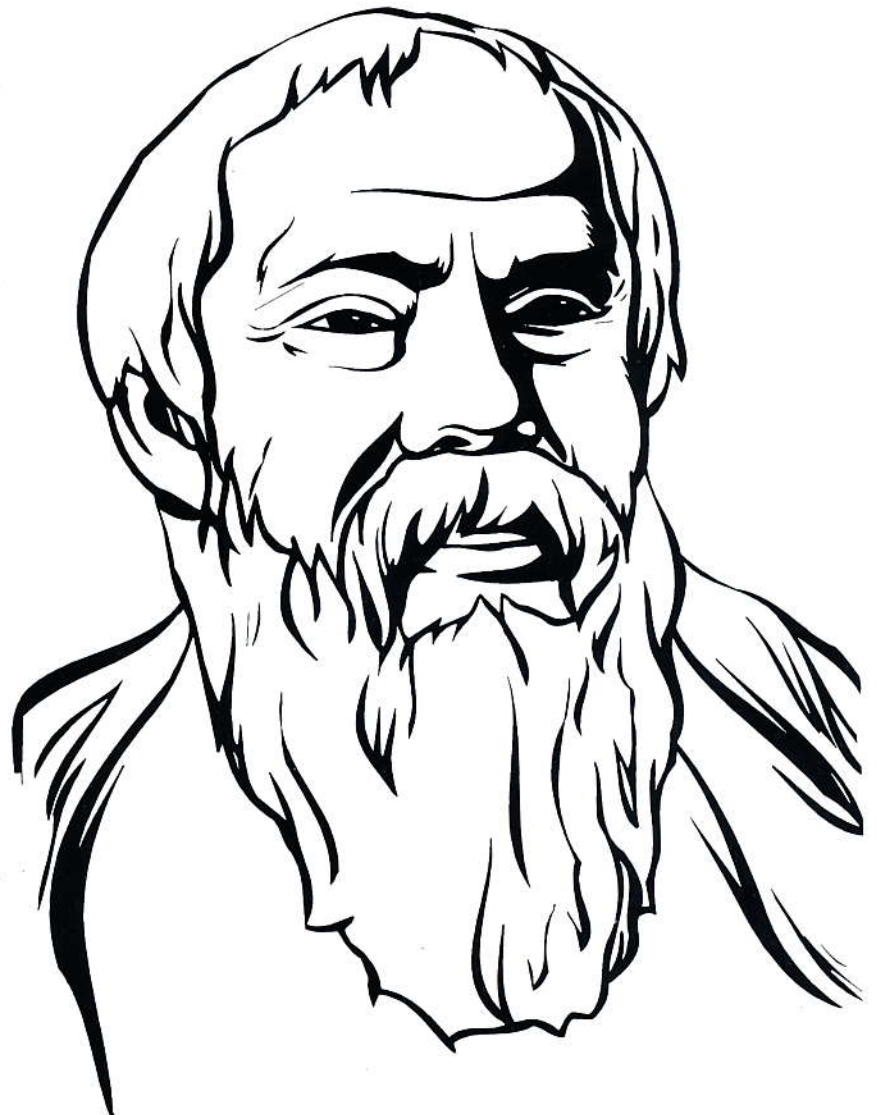
Euripides' most famous play is *The Bacchae*. This is an extraordinary and terrifying tale of the power of religious hysteria, mob rule, madness and irrationality destroying human life. The play represented a caustic commentary on the manifold evils of the Peloponnesian War, then raging between Athens and Sparta. As it approached the end of its golden age, Athens suffered terribly in the 30-year-war against Sparta; plague hit the city, and faith was weakened in Athenian institutions. The fierce themes of this play represented the disillusionment that the inhabitants of democratic Athens experienced during the war.

Euripides earned the title 'Philosopher of the Stage'. He held a prominent position in Athens, acted politically as the consul for Magnesia and possessed an enormous library, a rare thing for a private Greek citizen. In his youth he trained as a professional athlete and then turned from boxing to painting as a career. Several paintings attributed to him were exhibited publicly in later times. Euripides was a friend of the philosophers. We know that Socrates relished his writing; it is said that Socrates never even deigned to visit the theatre unless the performance was by Euripides, whose total output was between 80 and 90 plays.

Such was the beauty of Euripides' verse

that Athenian prisoners, held captive in Syracuse after the disastrous campaign by Athens against the city in 415 BC, escaped death and received their freedom if they could recite from memory passages from his works to their captors. Towards the end of his life, Euripides was invited to Macedonia by King Archelaus, and he spent his final years at the Macedonian court. So highly valued was he, that, at this death, the king cut off his own hair as an expression of grief.

'Such was the beauty of Euripides' verse that Athenian prisoners escaped death and received their freedom if they could recite from memory passages from his works.'



A MUSICAL DREAM

Ben Zander in London

In the Spring 1995 issue of *Use Your Head* magazine we reported on a spectacular performance Mahler's Sixth Symphony given by Ben Zander and the Philharmonia Orchestra at the Barbican. Almost exactly a year later to the day the same team was reunited at the Barbican for Mahler's dreamlike Ninth Symphony. Andrew Kinsman was there with Byron Jacobs.

The first thing that strikes you about a Ben Zander concert is the early start time. For you are not just going to listen to a musical piece, you are attending a musical evening. Every concert he performs is preceded by a talk about the music. Attendance is of course not compulsory, but you would be a fool to miss it. A large part of the London audience were wise to the situation. More than 700 of the capacity audience of 2000 made the effort to arrive at the hall by 6.45pm to listen to Ben Zander's views on Mahler's monumental Ninth Symphony, his last completed work. 'Some concerts have fewer people than this,' joked Zander.

The first thing that strikes you about Mahler's Ninth is the sheer scale of forces involved. More than 100 musicians are required; sometimes only very few are playing at the same time but at other times the stage is a frenetic blur of activity and the air a cacophony of sound. There are some very high sounds and some very low sounds, and sometimes Mahler makes very unusual combinations of instruments or makes the musicians play unusual notes. This must make it a nightmare for a conductor, but Zander was relaxed and approachable during his talk, showing no signs of the fact that in a few moments he would have to control such a seemingly uncontrollable hive of activity. He sat perched on the end of the stage, chatting away, occasionally singing a few motifs and playing a few bars on a portable keyboard.

Zander explained that the success of the piece rested on the fact that although there were so many musicians, Mahler's orchestration was such that every single one of them has a key role, each playing their hearts out with a different voice. Extraordinary demands are made on even the most able orchestral player. All of their training is geared towards playing

together, but Mahler instructs them to do precisely the *opposite*. Zander expressed the view that it is impossible for even such a renowned orchestra as the Philharmonia to give a proper performance without adequate preparation and was grateful to the Liechtenstein Global Trust for sponsoring the concert and enabling him to carry out four rehearsals instead of the usual two.

I am not remotely qualified to comment on the musical aspects of the performance. However, I can report that it was a rollercoaster ride of emotion, culminating in a dramatic climax in which Mahler's hero (the piece is widely seen as autobiographical) becomes resigned to his fate. Hilary Finch's review in *The Times* contained the following wonderful description of this finale: 'As its physical life fades in the last bars, the Philharmonia played with the concentration of the finest of chamber ensembles. And even when bow and baton had given the licence for applause, there was the deepest, longest silence this hall may have heard.'

Ben Zander will be returning to London to perform with the Philharmonia Orchestra next year. A performance of Beethoven's *Choral* Symphony has been scheduled for the Royal Festival Hall on 11 March 1997. Early booking is recommended. See you there!

'The first thing that strikes you about Mahler's Ninth is the sheer scale of forces involved. More than 100 musicians are required; sometimes only very few are playing at the same time but at other times the stage is a frenetic blur of activity and the air a cacophony of sound.'

Opposite:

Ben Zander contributing to the frenetic blur of activity that is Mahler's Ninth.

TEENY DUCHAMP 1906-1995

An Appreciation by artist Barry Martin

Teeny Duchamp (wife of Marcel Duchamp 1887-1968), died on 20 December 1995 in Villiers-sous-Grez, France, one month short of her ninetieth birthday. Alexina (Teeny) Sattler was born in Cincinnati, Ohio in 1906, the second child of Agnes and Robert Sattler, and she uniquely spanned the hub of the twentieth century art by her first marriage to Pierre Matisse (one of the three children born to the painter Henri Matisse) in Cincinnati in 1929, and her second to the artist Marcel Duchamp in New York in 1954. Arguably she was privy to the central planks of the twentieth century western art in these two quintessential artists. The latter the cornerstone of conceptualised art, redefining the pathway that art might take.

The former, the master painter of the decorative image imbued with vision. Two polarities that have come to dominate the art of our period.

In 1929, at the age of 23, Teeny married Pierre Matisse, after meeting in New York and a courtship in Paris. The marriage resulted in three children, Jacqueline, Paul and Pierre Noel. Art was to the fore. She was proud of being a confidante of Henri Matisse, a man she greatly respected. Her husband opened an important New York gallery in his own name, and both Jacqueline and Paul became respected artists in their own right. This chapter in Teeny's life came to an end shortly after by mutual agreement to terminate the marriage.

continued overleaf



Teeny knew Marcel Duchamp slightly through mutual friends in the New York world. But it was Max Ernst and Dorotea Tanning who brought them together to play chess in about 1952. Then in 1954 they married and thus started the 'magical years'. Marcel Duchamp personified the idea of the 'definitive invention in art'. He was a master of the concise statement that left nothing unsaid.

Teeny's introduction to Marcel bonded itself through the game of chess. From their initial gambits they developed a pact never to play against each other for the remainder of their lives, and this they kept. Having taught Teeny to play, Marcel took her regularly, for about seven years, to his chess club. She wanted to play seriously so she took various courses.

In February 1968, Teeny and Marcel collaborated with their good friend and composer John Cage in a now legendary performance at the Ryerson Polytechnic High School in Toronto called 'Reunion...'. A special chess-board was built to include a system of photo-electric cells that registered the chess moves in a series of different sounds with the performance consisting of one and a half games of chess.

Her last visit to England was as guest of honour along with the composer John Cage at the hugely successful symposium of 'Art and Chess' held at the Tate

Gallery, London in January 1991. She was also guest of honour at the qualifying chess matches held in Brussels in August 1991, where the Englishman Nigel Short beat Gelfand on his way to challenge for the World Championship. The draw for the Brussels round was unique as a replica of Duchamp's urinal 'Fountain' was used as the receptacle from which each player drew the colour he was to play.

Teeny's funeral took place on December 23rd and she was buried in the Cimetiere Monumental in Rouen, France, with Marcel and his family. Both were interred in a tomb which bears the following inscription wished for by Marcel: 'Besides, it's always the others who die.'

Teeny had for many years kept a small piece of folded paper in her purse on which she had written something that was important to her. It was a poem by St Francis of Assisi and the second verse, distinguishes the life of the remarkable person we knew as Teeny, it says:

'Oh divine master, grant that I may not so much seek

to be consoled, as to console;

to be understood, as to understand; to be loved, as to love;

for it is in giving that we receive;

it is in pardoning that we are pardoned,

and it is in dying that we are born to eternal life.'

Teeny Duchamp plays against Barry Martin on Marcel Duchamp's chess-board



THE FIRST ANNUAL UYHC MIND MAP COMPETITION

Michael Roman on the Culmination of a five-year Dream

'The UYHC, Tony Buzan, and the Central London Cell in particular, have combined together to help me to organise the first Mind Map competition and to initiate, possibly, the first official MM Library in the known universe!'

Imagine yourself in the year 2017. You are researching a complex new subject and want, firstly, to survey the sea of books on that subject. The nearby Mind Mapping (MM) Library would be your normal first call as you like meeting old friends and perhaps getting to know a few new faces, but it is rainy and cold. So it will have to be the Infonet again! Never mind. As you take a sip from your tea you open the Master MM, which gives an overview on every subject on the Information Galaxy. Seconds later you have already targeted a some interesting looking books and videos. The tea gets cold as your interest is aroused by several promising titles, and you start browsing through the first MMs. Within the hour you have a print-out of the five most interesting MMs and you have already sketched three initial MMs of your own: the first is on Outcome, the second on Sources of Information, and the third contains an outline of the structure of your research paper. As always, the Infonet Mind Map Library has saved you a great deal of time and proved again that searching for information is an enjoyable and informative pastime.

Too far fetched? Perhaps. But then again perhaps not!

I recently saw a four- or five-year-old dream come true. The UYHC, Tony Buzan, and the Central London Cell in particular, have combined together to help me to organise the first Mind Map competition and to initiate, possibly, the first official MM Library in the known universe!

The perceived standard for competition entries must have been very high as only six(!) members were brave enough to compete. Most club members produce MMs of consistently high quality, suitable for the annual competition and the newly formed MM Library Contributor Team.

Of the six participants, I would first like to mention Christine Barnes, who rightly aimed at Excellence and not Perfection and submitted an unfinished Mind Map. The other outstanding entrant was Dr Klaus Kleinfeld from Munich, who submitted no less than three MMs within a week or so of the launch of the competition. The voting was carried out democratically

by all 19 attendees of the meeting of 12 January at the London School of Economics. The first and second places were decided by a single point. I could not believe it when Paul Cousins, our official vote-counter, announced the final results after a second count. Second place went to Philip Chambers and first place ... to me! Here is the full result:

- 1 *Creating Affluence* by Deepak Chopra M.D. Mind Map by Michael Roman-Pintilie
- 2 *Present Yourself* by Michael Gelb. Mind Map by Philip Chambers
- 3 *Drawing on the Right Side of the Brain*. Mind Map by Nina Barclay
- 4 *Zeit Management* by Prof Seiffert. Mind Map by Dr Klaus Kleinfeld
- 5 *Getting to Yes* by Fisher, Ury and Patton. Mind Map by Derek Barclay
- 6 *The Body You Deserve* by Anthony Robbins. Mind Map by Dr Klaus Kleinfeld
- 7 *Personal Power* by Anthony Robbins. Mind Map by Dr Klaus Kleinfeld
- 8 *Fortunes* by Vera Cowrie. Mind Map by Christine Barnes

The MM Library and the MM Contributor Team are lead by Philip Chambers. Everyone is invited to send in, at any time, a MM on a chosen book. If the MM is of an acceptable standard, it becomes part of the library stock and the sender becomes a member of the team. When someone requires a colour copy of any of the MMs in stock, they will pay, in any one calendar year, printing and postage only up to the number of MMs that they have already contributed to the library. If they are not part of the team, a standard charge of £3 will be added to the basic printing and postage cost. Profits will be used to subsidise the annual MM competition and other related costs.

Let's step into the future together! Keep sending in your wonderful Mind Maps and feel free to use the library. Contact Philip Chambers on 01784-259241 or e-mail p.b.chambers@stanwell.demon.co.uk and send your MMs to Michael Roman-Pintilie, 93 Fox Lane, London N13 4AP.

THE INTEL UK CHESS CHALLENGE

Michael Basman reports on a new Opening

**'... everyone's a player,
so everyone's a
winner.'**

The decline of chess activity in schools in this country could be seen to mirror the general fall in education standards over the past decade. There is only one national schools event, a knock-out tournament sponsored by *The Times*, which attracts about 400 secondary schools each year.

Since there is no national competition for primary schools, a new opening is called for, the Intel UK Chess Challenge (Intel, the computer chip company, is sponsoring the event to the tune of £2,300). The tournament is based on a series of events that took place between 1985 and 1995 in Surrey and South London. About 100 schools and 3,500 children took part annually, with a Megafinal of 300 players aged between 6 and 18. In going nationwide, I had hoped that 1,000 schools might enter, or about 30,000 players, but at present the number is 700 schools, 22,000 players. Nonetheless, 22,000 is still a figure to conjure with. How can such numbers be marshalled, bearing in mind that they have been produced by one man (without a dog)?

The main idea is this: chess itself is a very economical game. Just a board and a few pieces and you have a lifetime of enjoyment. Intelligent people play it but you don't have to be a genius, as you can always find an opponent at your level; and children can excel from as young as four. But taking teams to play other schools is very time-consuming, so the first stage of the event is played within the school, a round being played every week. Numbers in each school vary, 20-30 is normal, but some schools, e.g. Wellesley Park (Somerset) and RGS Junior (Newcastle), have managed over 150 players.

The second idea: everyone's a player, so everyone's a winner. For a child, the appearance of defeat or the actuality of zero on a scoreboard can be very depressing. At that age protection is needed for the majority. Thus for every game played you score one point, two if you

draw and three if you win. With three losses you still qualify for your Intel badge, although of course, the winners will get them sooner.

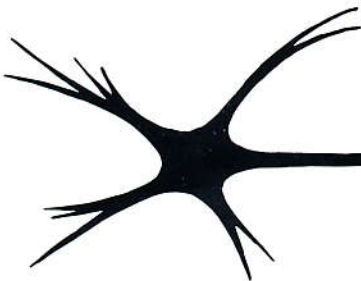
Although we need to support everyone, chess is a competitive game, so for additional wins, you gain gold spots on your badge plus other prizes, such as books and chess mascots.

At the end of the Spring term the top players from each school will progress to regional Megafinals, from where the best will progress to the national Gigafinal. The titles to be gained at the Megafinal are Supremo (boys) and Suprema (girls) and the titles to be won in the Gigafinal are Ultimo and Ultima.

One advantage of the structure of the tournament is that it involves the schools and school-teachers in as little work as possible. Also, when the children qualify for the Megafinal, they do so as individuals. It is up to them, and their parents, to get them to the tournament on time. Finally the entry fee is very low: £15 enables a school to run an event for up to 30 players.

What are the prospects for the success of this new opening? At present the game is still in its early stages. In fact the opening has gone well; some sponsorship money was found; entry forms were distributed to 25,000 schools during the Autumn of 1995, and over 700 entered.

The middlegame (the tournament in each school) is now due to start and should play itself. Then there will be an exceedingly tricky endgame phase, involving staging Megafinals throughout the UK in May 1996, followed by the Gigafinal. But hopefully all, or sufficient numbers of, pawns will reach the queening square and the operation will be crowned with success. If it is, we could have several young national stars, and in the following year more people and schools will join in. The number of 22,000 will be left far behind and perhaps the opening will be played internationally...



USE YOUR HEAD CLUB NEWS

Five Live

Bryan Hopkins writes:

Justin from the UYHC has asked me to inform you of the new UYHC that we have just created in the Stratford and Redditch region. I understand that the UYH Triple Five Club is the first of its kind to be formed in the Midlands.

I was one of a number of people at the 1995 UYHC Conference to express an interest in starting a club. By a neat coincidence I met Barry Mapp, one of the Radiant Thinking instructors, at the conference and I was pleased to discover that he lived within twenty miles of me, and that we also shared the same Tai Chi teacher.

Since the conference I have contacted all the club members in this area (extending as far as Northampton and Malvern). This led to a number of initial contacts and meetings and ultimately to the creation of this new club. Caroline and Paul Hastings (see page 47 of the last issue of *Use Your Head* magazine), Barry Mapp, my wife Clare and I, together with six other UYHC members are the founding members.

At our first meeting we elected a Chairman, Secretary, Treasurer and Programme Co-ordinator, and we agreed the outline for a Members Handbook. We also agreed on the steps to be taken to develop and publicise the club, and that we will hold meetings on the first Thursday of each month, with at least three meetings a year being open to include guests and potential members, and for which a small admittance charge will be made.

Why 'Triple Five'? This will be explained at our March meeting, but the theme of the meeting 'Mind, Memory, Magination, Movement and Moment' provides a clue.

Since I had the good fortune to meet Tony Buzan about two years ago, I have obtained considerable benefits from the inspiration he has produced in me, and I have very keen that others should likewise have the opportunity to benefit. I believe that, with improved marketing, there is a tremendous scope for growth in UYHC membership. I hope that the Triple Five Club will be able to play a part in achieving that growth.

For further information about the Triple Five Club, please write to Bryan Hopkins, 4 Great Barn Lane, Headless Cross, Redditch, Worcs B97 5XE.

Use Your Held Club Conference

Don't forget the following date for your 1996 diaries: The 1996 Conference will be held at Simpson's-in-the-Strand on Sunday 23 June.

Brain Awards

The Brain Trust welcomes nominations from Use Your Head Club members for the 1996 Brain of the Year award. Please send your suggestion to the Brain Trust, 8 Cresswell Gardens, London SW5 023.

With the year 2000 looming up, awards are also in the pipeline for Brain of the Decade, Brain of the Century, Brain of the Millenium, and Brain of All-Time. Suggestons for these categories are also welcome.

Quiz Answers

1. January 15th is the birthday of Martin Luther King Jr - now an official holiday in the USA. He was famous for his dramatic sermon en-visioning racial peace and harmony, dominated by the quote 'I Have A Dream'. The Swedish singing group that could have provided you a clue was ABBA, who had a hit song of that title.

2. In his famous soliloquy, Hamlet the Prince of Denmark contemplates suicide: 'To be or not to be...to sleep, perchance to dream.' Then the thought of what theme those endless dreams may take spurred him to stay among the living for much of the rest of this, the bard's longest play. (Act III Scene 1).

3. The song 'White Christmas' (specifically the recording by Bing Crosby) has been commercially the most successful recorded song (though if royalties were paid and cost recouped, 'Happy Birthday to You' would certainly exceed it). The opening line of this Irving Berlin song is 'I'm dreaming of a white Christmas...' The irony of it is that while Christmas is ostensibly a Christian holiday, the song's composer, Irving Berlin, was decidedly Jewish.

4. Wells was having fun with the lines 'We are such stuff as dreams are made on, and our little life is rounded with a sleep,' from Shakespeare's *The Tempest* (Act IV Scene 1 - Prospero talking).

5. In the *New Testament* (Matthew's gospel, Chapter 27:17-19, we find Pontius Pilate trying to decide the fate of Jesus, who had been delivered to him for summary judgment. Pilate's wife, who had suffered bad dreams, urged her husband to have 'nothing to do with that just man'.

6. There may be many more, but we thought of 'Any Dream Will Do' (the main song from 'Joseph and the Amazing Technicolour Dreamcoat'), and of course 'The Quest' (from 'Man of LaMancha') which almost everybody thinks is called 'The Impossible Dream'.

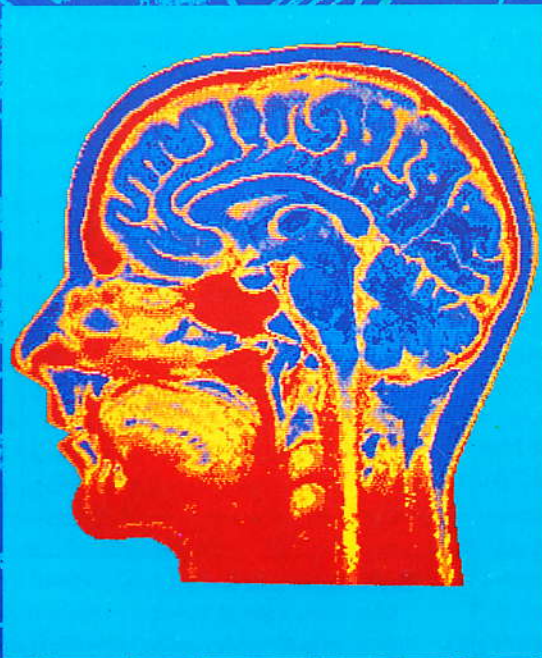
7. After a particularly productive drug-induced dream session, Samuel Taylor Coleridge, the poet and essayist whose life straddled the opening of the 19th century, awoke to record what was whole in his mind - the best poem ever afforded the breath of man. In the course of penning *Kubla Khan* (replete with its 'woman wailing for her demon-lover') he was disturbed by a knock at his door - an inconsequential visit by somebody known only to history as 'a person from Porlock'. When he returned to his writing desk, the glories of Xanadu had faded from his memory, and the world had to be content with only a few dribbles of 'the milk of Paradise'. Ever since, 'a person from Porlock' is shorthand for 'an unwelcome interruption'.



TONY BUZAN
WITH BARRY BUZAN



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