## The international Brain Club journal

Vol. 1 No. 1
Winter '89/90

Edition 1 £2
(5,000 copies)


The Brain Club: An idea whose time has come

Ways you can get the best from your brain

How Edward Hughes made an impossible dream come true

Why American schoolgirl Lana Israel was the toast of Sydney

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## Welcome to our vision

Welcome to the first edition of Synapsia, the international Brain Club journal. It is designed as a forum for new ideas about you and your most valuable asset: your brain.

Synapsia has a vision: our whole planet 'brain aware" by the end of this century. That means we have a lot of work to do. The "we"' includes you.

Because Synapsia is your journal. We'd like to hear from you. What do you think of it? Is there anything that you think should be included? What would you like to read about? Write and let us know!

Above all, this journal is an opportunity for you to have a say in your club. A synapse is the junction or meeting point of brain cells. This journal is also a meeting place: a forum for ideas about our most precious asset, our brains.

I repeat that this journal has a vision. We intend to transform the way people think, and the way people learn how to learn. These skills are available to all of us. With them we will achieve our vision of a 'brain aware" planet by the end of the century.

Who are the people who will achieve this miracle? The answer is you and me. We are the people who can create change in our world. We are the people who will create change in our world. Welcome to our vision.

Stephen Quinn

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## An idea whose time has come

by Tony Buzan

THE HISTORY of the Brain Club can be traced to two particular moments in time which "met" and ignited to give the flame of a new idea.

The first was in May 1973 when I was international editor of Mensa (the high IQ society) magazine. I had been asked to precis the information I had been gathering on the human brain and its intelligence, and to make suggestions based on that information. You can see the embryo:

- In all disciplines researchers have found themselves being drawn toward the same vortex: the brain-mind-body problem and the inherent question of the organism's potential.
"Biochemists have microscoped their way to the hypothetico elemental molecules (DNA RNA) to find that sub hierarchies appear to exist; mathematicians have postulated numerous theories on the mathematical constructs of the universe, but have become universally unstuck when attempting to devise comprehensive models for the organism which is devising those models; physicists have spanned macro-cosmic time and space yet now find themselves confused by the apparent enormity of a small node; psychologists have trampled witlessly over the whole area and only now are realising that they themselves are being absorbed by it; philosophers in attempting to define it, have found it laughingly forces them into a spiral of defining definitions, with no apparent source. And fringe science has been hurling some hefty spanners into the traditional works.
"It is also now known beyond all doubt that the mind is a fabric consisting of layers of inter-linked networks which can control heart beat, oxygen intake, internal organs and brain waves consciously. Further, there is evidence to suggest that the mind has an even more extensive control over functions. In deep states of meditation or hypnosis people have been observed to eliminate all pain, to paralyse any part of their body completely, to produce massive skin eruptions where no
cause was apparent and to eliminate them immediately, to induce any predetermined sympton artificially, to perform feats of strength normally attributed only to super- or mad-men, and to cure themselves of apparently incurable diseases.
"In the more academic areas forerunners such as Penfield have performed experiments in retention and recall which suggest that the basic storage capacity of the brain is absolute in terms of remembering its own existence. Subjects whose brains were electronically probed produced complete, multisensory recall of situations randomly triggered and ranging over complete lifetimes. In addition to this, recent work on mnemonic systems indicate that even without electric interference the brain can remember 7,000 disconnected items in sequence, in random order, and in reverse order with no decline in performance as the number of items to be recalled is increased.


## Reassessment of learning

"In view of all the above it is now obvious that a complete reassessment of human learning and potential must be made. One of the first considerations is of course how to best educate an organism which is estimated to have a minimum of 100/800 possibilities for associative interconnecting - it is apparent that our standard inflexible linear and restricted approaches are no longer acceptable.
" It is equally apparent that standard psychological methods for testing ability must be changed almost totally, if not eliminated entirely. To judge an organism's capacity, for example, by its forced response to a question about shapes in an ink blot is ludicrous when it is realised that the same organism can create multidimensional holographic, varicoloured, original and projected images without assistance. This ability, variously labelled daydreaming, hallucinating and madness etc, is either taken for granted or is denigrated. But it takes little acuity to see that any organism which can create and observe the creation at the same time is formidable.
"Similarly the measuring of general aptitude with 'intelligence' tests is absurd.

The Berkley Studies on creativity indicated no link between high IQ and a person who was independent in thought and action, less dogmatic and more relativistic in his view of life, preferring complexity and novelty, valuing and having a good sense of humour, very involved in theoretical and aesthetic values, fluent, flexible, original, comprehensive and astute. Not much is left! Rather than forming organisations which assume that some people are more 'interesting' and 'able' than others, surely it is time that we evolved. It is now the time to see Man and the universes as they are: infinitely involved, infinitely fascinating and worthy not of categorization and division, but of understanding.',

## The second spore

The second major event took place in April 1986 when an organisation called the Turning Point asked me to address their monthly meeting in Stockholm. Turning Point had been formed by a group of young minds who felt that mankind, and indeed the entire planet was at a "turning point". They as individuals and as a group needed to acquire as much information as possible to help them make a positive contribution to the future of the race.

During the course of my lecture on the brain, I distributed a questionnaire asking them to rate themselves on a scale of 0 to 100 in various categories including learning skills, intelligence, general selfevaluation and hope for the future (the fore-runner of the one in your membership pack).

The average rating in each category was between 60 and 70 per cent. It struck me that this was definitely above average, but far below what should be natural, especially in a group who had come together specifically because they believedin the future and believed they could learn and contribute.

As I continued to discuss with them the brain and the future, I was simultaneously exploring the question "What

More next page
can one do to help groups such as this (and indeed all individuals and groups) to develop their phenomenal natural capacities in a way that is continually self-regenerating and expansive?'' In a flash my distilled thoughts from May 1973, the intervening years of continued exploration of the brain's and body's capacities, and the immediate situation with those amazing people in Stockholm came together. Of course! The Brain Club!

## Brain Club members

The Brain Club is for anyone who wishes to gain access to their brain, and who simultaneously wishes to use it well. They are simple qualifications for membership, but they conceal the most staggering set of qualifications that "anyone" needs to become a "someone". Consider these facts (qualifications) about the average human being -- yourself.

1 Each human is created from a single sperm, one of 400 million produced by the father, and a single egg produced by their mother. These eggs are so small that it would take two million to fill an acorn cup.

2 Within each sperm and egg combination there is the capacity to create about $300,000,000,000,000$ billion humans who are all unique.

3 Each human eye contains 130 million light receptors.

4 Each human ear contains 24,000 fibres that are able to detect enormous ranges and subtle distinctions in the molecular vibrations of the air.

5 To empower body movement, locomotion, and environmental sensitivity, we have 200 intricately architectured bones, 500 totally co-ordinated muscles, and seven miles of nerve fibres.

6 The human heart beats $36,000,000$ times each year, pumping 600,000 gallons of blood each year through 60,000 miles of tubing, arteries, veins and capillaries.

7 Human lungs are composed of

$600,000,000$ globes of atmospheresensitive capacity.

8 The blood circulating in the human body contains 22 trillion blood cells. Within each blood cell are millions of molecules, and within each molecule is an atom oscillating at more than 10 million times per second.

9 Two million blood cells die each second. These two million are replaced by two million more.

10 The human brain contains 13 billion neurons or nerve cells, more than two and a half times as many cells as there are people currently inhabiting the planet.

11 The human brain contains 1,000 billion protein molecules.

12 The number of internal "maps of thought" that the brain is capable of producing is one followed by $10.5 \mathrm{mil}-$ lion kilometres of standard typewritten zeros.

13 Each human body has four million pain-sensitive structures.

14 Throughout the human body there are 500,000 touch detectors.

15 Throughout the human body there are 200,000 temperature detectors.

16 Within each human body is enough atomic energy to build any of the world's greatest cities many times over.

17 Since the beginning of time there have been 70 billion humans, each one astoundingly different from all the others.

18 The human olfactory system can identify the chemical odorant of an object in one part per trillion of air.

19 Research is increasingly showing that the creative and memory powers of the brain tend toward the infinite.

## Learning how to learn

The Brain Club is designed to nurture these incredible beings, and to assist in the next leap in evolution: the awareness of intelligence by itself, and the knowledge that this intelligence can be nurtured to astounding advantage. Consider again the following:

Stock market analysts watch, like hawks, 10 individuals in Silicon Valley. When there is even a hint that one might move from Company A to Company B, the world's stock markets shift. The English Manpower Services Commission publishes a survey in which it is noted that of the top 10 per cent of British companies, 80 per cent invest considerable money and time in training. Of the bottom 10 per cent no money or time is invested.

In Minnesota, the Plato computer education project raises the thinking and academic performance levels of 200,00 pupils. In the armed forces of an increasing number of countries, mental martial arts have become as important as physical combat skills. National Olympic squads devote as much as 30 per cent of their training time to the development of mental set, stamina, and visualisation skills.

In the Fortune 500, the top five computer companies alone spend more than a billion dollars on educating their employees. In Caracas, Dr Luis Alberto Machado became the first human being to be given a government portfolio as minister of intelligence, with a political mandate to raise the level of the mental power of a nation.

This encouraging news must be considered in the context of the problem areas defined by the global community as most significant. The information from the brain front must then be applied to these main areas.

Over the past 16 years I have polled
more than 100,000 people on each of the five continents. Among the more than 100 mental skill areas commonly mentioned as requiring improvement, the top 20 are:
Memory
Concentration
Presentation skills/public speaking
Presentation skills/written
Creative thinking
Planning
Thought organisation
Problem analysis
Problem solving
Motivation
Analytical thinking
Prioritising
Reading speed (volume of material)
Reading comprehension
Time management
Stress
Fatigue
Assimilation of information
Getting started (wasting time)
Decline for mental ability with age
Each of these areas can be, with the aid of modern research on the functioning of the brain, tackled with relative ease. I shall touch on seven major areas:-

## 1 Left and right brain research 2 Mind Mapping

3 Super-speed reading/Intellectual Commando Units
4 Mnemonic techniques
5 Memory loss after learning
6 The brain cell, and
7 Decline of mental abilities with age
I will relate each of them to many of the major problem areas, and show how our new knowledge can be applied to the raising of mental performance. It has now become common knowledge that the left and right hemispheres of the brain dominantly deal with different intellectual functions. The left brain primarily handles logic, language, number, sequence, analysis, listing while the right brain deals with rhythm, dimension, colour, imagination, day dreaming and spatial relationships.

What has recently been realised is that the left brain is not the so called academic side, nor is the right brain the so called creative, intuitive, emotional side.

We now know from volumes of research that both sides need to be used in conjunction for there to be both academic and creative success.

The Einsteins, Newtons, Cezannes, and Mozarts of this world, like the great business geniuses, combined their linguistic, numerical and analytical skills with imagination in order to produce their creative masterpieces

Using this basic knowledge of our functioning, it is possible to train ourselves in skills relating to each of the problem areas, often producing incremental improvements of as much as 100 per cent. My contribution to helping and achieving such improvement is the Mind Map.

In traditional note taking, whether it be for memory, for the preparation of communication, for the organisation of thought, for problem analysis, for planning or for creative thinking, the standard mode is linear: either sentences, short phrase lists, or numerically and alphabetically ordered lists. These methods, because of their lack of colour, visual rhythm, dimensions, image and spatial relationships, cauterise the brain's thinking capacities, and are literally counterproductive to each of the aforementioned processes.

Mind Mapping uses the full range of your brain's abilities, placing an image in the centre of the page to facilitate memorisation and the creative generation of ideas, and subsequently branching out in associative networks that mirror externally the brain's internal structures. By using this approach, the preparation of speeches can be reduced in time terms from days to minutes; problems can be solved both more comprehensively and more rapidly; memory can be improved from absent to perfect; and creative thinkers can generate a limitless number of ideas rather than a short list.

The Mind Map on page 4 is of a complete mind and body course in which the central image is a brain, linked with the physical body, and the two hearts:
emotional and cardio-vascular health. The main branches emanating from the central image encapsulate the main themes of the course, starting at $9 o^{\prime}$ 'clock with initial exercises.

The course then deals, clockwise, with each of the main elements noted, concluding with an integration and review for the future. You can see that the Mind Map can encapsulate in a very small space a mass of information, and can be used for both previewing and reviewing purposes. A number of the main elements in the Mind Map will be considered next!

Combining Mind Mapping with new super speed reading techniques that allow speeds of more than 1,000 words a minute in conjunction with excellent comprehension, and eventual effective reading speeds of about 10,000 words per minute, one can form intellectual commando units. Reading at these advanced speeds, Mind Mapping in detail the outline of the book and its chapters, and exchanging the information gathered by using advanced Mind Mapping and presentation skills, it is possible for four individuals to acquire, integrate, memorise and begin to apply in their professional situation four full books' worth of new information in one day. The implications are obvious.

Mnemonic techniques were invented by the Greeks, and were until even recently dismissed as "tricks". We now realise that these devices are soundly based on the brain's functioning, and that when applied appropriately they can dramatically improve any memory performance.

In the mnemonic techniques one uses the principles of association, and imagination, making dramatic, colourful, sensual and consequently unforgettable images in ones mind. The Mind Map is, in fact, a multi-dimensional mnemonic, using the brain's innate functional areas to effectively imprint required information upon itself.

Using mnemonics businessmen have been trained to remember perfectly 40

More on next page

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newly introduced people, and similarly to memorise lists of over 100 products, facts and data. These techniques are now being applied at the IBM training centre in Stockholm, and have been a major reason for the success of their 17week introductory training programme. Memory loss after learning is dramatic. After a one-hour learning period, there is a short rise in the recall of information as the brain integrates the new data. This is followed by a dramatic decline. By the end of 24 hours as much as 80 per cent of detail is lost.

The implications are disturbing especially for business if a multi-national firm spends $\$ 50$ million a year on training. Within a few days of that training's completion, if there is not appropriate reviewing programmed into the educational structure, the value of $\$ 40 \mathrm{mil}$ lion of training has been lost. By a simple understanding of the memory's rhythms it is possible to avert this decline, and also to train personnel in such a way as to increase the amount learned in any training by using extra techniques.

In the last five years the brain cell has become the new frontier in the human search for knowledge. We have discovered that not only do we each have $1,000,000,000,000$ brain cells, but that the interconnections between them can form patterns and memory traces that
permute to a number so staggeringly large as to be functionally equivalent to infinite. The number, calculated by the Russian neuro-anatomist, Pyotra Anohkein, is one followed by 10 mil lion kilometres of standard (11pt) typewritten noughts.

With this inherent capacity to integrate and juggle with the multiple billions of bits of data that each of us possess, it has become increasingly apparent to those in brain research that adequate training of our phenomenal biocomputer, which in a second can calculate what it would take the Cray computer, at 400 million calculations per second, 100 years to accomplish, will enormously accelerate and increase our ability to problem-solve, to prioritise, to create and to communicate.

The usual response to the question: "What happens to your brain cells as they get older?", is: "They die." It is usually voiced with an extraordinary and surprising enthusiasm. One of the most delightful pieces of news from the brain research front comes from Dr Marion Diamond of the University of California, who has recently confirmed that there is no brain cell loss with age in normal, active and healthy brains. On the contrary, research is now indicating that if the brain is used and trained, there is an increase in the brain's interconnective complexity -- that is, intelligence is raised.

Training of people in their 60s, through to their 90 s, has shown that in every area of mental performance statistically significant and permanent increases can be made with adequate training.

We are at the beginning of a revolution the like of which the world hase never seen: a huge leap in the development of human intelligence. In education, in business, and on the personal front, information from the psychological, neurophysiological and educational laboratories is being used to dissolve rapidly problems which had hitherto been accepted as a normal part of the human condition.

By applying our knowledge of the brain's separate functions, by externally reflecting our internal processes in Mind Map form, by making use of the innate elements and rhythms of memory, and by applying our knowledge of the brain cell and the possibilities for continued improvement throughout life, we realise that a massive leap in evolution is not only possible, it is in the process of happening. The Brain Club is in the vanguard.

Welcome, then, to the next great human adventure. An adventure in the exploration of your own and other people's vast intelligences. An adventure that will prove stimulating, challenging, and profound.That adventure is you.


## COMPETITION

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To win a copy of one of the newly revised and updated editions of Tony Buzan's highly acclaimed 'user manuals' for the brain simply answer the questions below:

1) How many years ago was the location of the brain discovered?
a) 50 years
b) 500 years
c) 5000 years
2) Which side of your upper brain is used in Tony Buzan's famous Mind Mapping technique?
a) the right side
b) the left side
c) both sides
3) How many different chemical reactions take place in your brain every minute?
a) Between 1,000 and 10,000
b) Between 10,000 and 100,000
c) Between 100,000 and $1,000,000$

The first 40 correct entries received will win a copy of either USE YOUR HEAD or USE YOUR MEMORY. Please send your answers on a postcard to: Janet Dominey, BBC Books, Room A3125, Woodlands, 80 Wood Lane, London, W12 0TT. You should specify which of the two books you would prefer to receive.

The new editions of USE YOUR HEAD and USE YOUR MEMORY by Tony Buzan were published by BBC Books on 28th September and are available through bookshops at $£ 6.99$ paperback or $£ 13$ hardback. They can also be obtained from The Buzan Centre on 0202-533593.

# An impossible dream realised 

Edward Hughes confounded his teachers and gained spectacular results after following a study plan outlined in Use Your Head

EDWARD Hughes was 15 and a "fairly average student" when he was introduced to Use Your Head. His teachers described him as "middle of the form basically, not doing particularly well in any subject".

A short while earlier he had taken his O level examinations. His results, as expected, had been C's and B's. He was particularly disappointed because he had wanted to go to Cambridge University and he realised that if he carried on academically the way he was, he "didn't stand a chance".

It was then that Edward's father, George, introduced him to Use Your Head. Armed with new information about himself, and about how to Mind Map, learn and study, Edward went back to school revitalised. He announced that he was going for A's in all his subjects, and that he definitely wanted to be put forward for Cambridge. The reaction of his teachers was understandably bemused and varied. "You can't be serious: come on, you've got no chance -- your academic results have never been any where near the standard which Cambridge requires," said one.
" Don't be daft! You could possibly get a B, but you'll probably get a C,'’ said the second. When Edward said he wished to take not only the standard exam, but also to write the scholarship paper, the master said flatly, ' No, it's a waste of the school's money and your time entering for that exam. We don't think you'll pass. The exams are very, very difficult - we don't even get many passes from our best candidates." After Edward persisted, the school was willing to put him forward, but he had to pay his own $£ 20$ entrance fee in order not to "waste the school's money".

The third teacher said he had been teaching the same subject for the past 12 years, that he was the expert in the area, and that he knew what he was
talking about when he said that Hughes would only get a B or a C. The teacher named "another chap" who was a much better student than Edward, and said that Edward would never be as good as the other.

The fourth teacher chuckled, said he obviously admired Edward's ambition, said that Edward's dream was possible but unlikely, said that even if he worked hard he'd only get a B, but wished him luck and said he always liked someone who showed initiative.

To each of the teachers, and to anyone who questioned his goals, Edward's response was always firm and polite: "I'm going to get an A". The school initially did not want to put Edward's name forward. But after a while agreed to do so, letting the colleges at Cambridge know that they didn't think that this particular student was likely to get the place for which he applied.

The next and immediate stage was the college interviews. At these, the Cambridge dons informed Edward of the school's opinion of him, agreed with the school that his probability of success was very low, admired his initiative, told him that he 'd need at least two B's and an A, but more probably two A's and a B, or three A's and wished him luck.

Still undaunted; Edward pursued a study plan outlined in Use Your Head plus physical training. In his own words: "I was getting nearer the exams. I summarised my last two years of school notes neatly into Mind Maps. I then coloured them, highlighted them, and produced large master Mind Maps for each of the courses, and in some instances for each major section of each course. In this way I could see where the more detailed elements fitted together, in addition get a good overview, this enabling me to be able to "just flick through", giant sections of the course.
"I kept reviewing these Mind Maps once a week, and as it got nearer to the exams even more regularly. I next did recall Mind Maps, not looking at my books or other notes, simply drawing from my mind what knowledge and understanding of the subjects I had, and then comparing these Mind Maps with my master Mind Maps, checking the differences.
"I also made sure that I had read all the main key books, and then sorted these down to a few, read them in depth, and Mind Mapped them so that my understanding and memory were maximised. In addition I studied good essay form and style, and used my own Mind Maps as a basis for practising essay and examination writing.
"I accompanied this by getting fitter, by running two or three miles, two to three times per week, getting lots of iresh air, doing lots of press-ups and situps, and working out in a gym. I became better physically, which I found helped my concentration enormously. As they say, healthy body, healthy mind; healthy mind, healthy body. I felt better about myself and my work."

Eventually Edward sat four examinations: His results were:

## Subject

Marklvank
Geography
A\Top Student

## Geography Scholarship

Distinction $\backslash$ Top Student
Medieval History A\Top Student Business Studies

A and 2 Distinctions $\backslash T o p$ Student
These were the best marks the school had ever had. Within a day of the publication of the results, Edward's firstchoice college at Cambridge had confirmed his place, and accepted his request for a "year off" to see the world.

Before going to Cambridge, Edward decided that, in addition to academic success throughout his time at university, he would set himself the goals of creating a new student society, playing lots of sports for the college, making many new friends, and basically having "a tremendous time."


In sports he was immediately successful, playing on the college soccer, tennis and squash teams. And in the area of student societies he might even be termed an over-achiever. In addition to founding the Young Entrepreneurs Society, the largest of its kind in Europe, he was asked to preside over the Very Nice Society, a charitable society of 3,600 members. Under his guidance its membership grew to 4,500 -- the largest society in the history of the university. In view of his work for these two societies, the other society presidents asked Edward to form and preside over a society for presidents. This he did and became the first president of the Presidents Club.

Academically he first studied the habits of the "average student". "They spent about 12-13 hours reading for each essay, linearly noting all the information they could, reading all possible books, after which they'd spend three to four hours writing the essay itself. Some students would actually rewrite their essays, occasionally spending an entire week on one essay."

In view of his experience with O level preparation and examinations, Edward decided to allocate himself two to three hours a day, five days a week, to study. As he described: "During those three hours I would go to a key lecture, summarising all the relevant information in Mind Map form. I set myself the goal as soon as any essays were set, I'd go away and do a Mind Map on what I knew about the subject or what I thought was relevant. And then leave it for a couple of days, think about it, turn it
over in my mind, and then speed and range read the relevant books, Mind Mapping the relevant information. $I^{\prime} \mathrm{d}$ then take a break or do some exercise, and then come back and do a Mind Map on the essay itself. Having completed my essay plan, I'd take another break, and then sit down and complete the essay always within 45 minutes. With this technique I regularly achieved good results. "

Before the final Cambridge examinations, Edward worked to a schedule virtually identical to that with which he prepared his A levels, and took six final examinations. In one he was given a pass, normally considered fair but here excellent because 50 per cent of those taking the examination failed it, and no firsts were given. In the second, third and fourth he gained 2.1 's. And in the final exams two first classes - not only first classes, but star firsts, the highest marks in the university for that subject. Immediately after graduation, Edward was offered many jobs but chose one as a strategic thinker for a multi-national company, a job described by the university as "one of the best ever" for a Cambridge undergraduate.

As Edward summarised: "I got a lot out of Cambridge -- a lot of friends, a lot of experience, played a lot of sports, had success in academia, and three years of absolutely fantastic enjoyment. One of the main differences between myself and the others was simply that I had a strategy for studying and thinking -how to use my head. I was a C and B student before I knew how to 'get an A'. I did it. Anyone can."

## Intelligence about intelligence

by Stephen Quinn

SOME commonly held theories about genius and creativity -- that people are "born"' geniuses, or that it is a "gift from God" -- are a myth. That is the fascinating insight of American academic John Briggs in his latest book Fire in the Crucible: The Alchemy of Creative Genius.

Briggs quotes some impressive sources. Shortly before his death Albert Einstein admitted "I know quite certainly that I myself have no special talent. Curiosity, obsession and dogged endurance, combined with self criticism, have brought me to my ideas." The inventor Thomas Edison echoes this notion. "Godlike genius, godlike nothing! Sticking to it is the genius."

## Sinister-dexter

The American Brain-Mind magazine reports that recent research on left and right handedness has shown:
\# ambidextrous children tended to learn to read earlier than others. They also outperformed non-readers at matching sounds and pictures, a sign that they have more efficient transfer between the hemispheres of the brain.
\# better spellers remember words by shape rather than by sounding them out.

## Dreams

The visions of dream sleep may be activated by psychedelic substances

produced in the pineal gland. J.C. Callaway of the school of pharmacy at the University of California, San Francisco, reports in Medical Hypotheses magazine (26: 119-124) that the psychedelic compounds, known as beta-Carbolines, are present in many plants and animals.

Some societies that existed before the use of written records used plant forms of the substance to produce out-of-body experiences and clairvoyance.

## Memory

The time of day may have an effect on people's ability to remember, according to research at Sussex University. Psychologist Jane Oakhill reports in Applied Cognitive Psychology (2: 203-212) that people make different types of recall errors depending on whether they
read a story in the morning or afternoon. If a story was read in the morning, people were better able to recall details like exact text. But they were more likely to grasp important information from an afternoon reading. The discovery could be useful in determining the best time of day for comprehension and learning of high-level information.

## Humbug?

Humming and singing apparently cleanse the brain. Screaming and loud talking probably have the same effect, say New York pathologists Karel Jindrak and his daughter Heda Jindrak.

Humming, singing and other loud vocalisation stimulate the brain's equivalent of a lymphatic system.

Vibrations of the larynx (voice box) and air in the vocal tract are partially transmitted onto the cranium (skull), massaging the brain. This massaging enables more cerebrospinal fluid to pass through the brain and helps remove waste materials. The Jindraks have published their findings in a book: Sing, Clean Your Brain, and Stay Sound and Sane.

## Brain switch

A German researcher believes that the brains of humans switched from right to left dominance about 2,600 years ago. Pottery decorated before the sixth century BC was generally painted from right to left, judging from brush strokes. After that period the brush strokes were reversed, perhaps because of a greater emphasis on language and writing.

## Mensana

The study of the links between the brain and health -- psycho-neuroimmunology (PNI) -- is attracting a considerable amount of research. But the term is almost unpronouncable. So the Brain Club magazine suggests some alternatives: hyfihya (pronounced hiffy-higher) and interbam. The first stands for "How you feel is how you are" and the second represents "interactivity of body and mind'".

> If you have any interesting or useful information about the brain and related subjects, send it to:

## INTELLIGENCER (S.Quinn)

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## Brain Clubs in schools

## by James Lee

WELCOME to heaven! Here you are, sitting attentively on a thick, soft carpet facing God on his/her huge velvet chair. God explains that she/he intends to develop the most creative, positive, and wise human being of all time. To do so, a chosen individual must be introduced to the skills of the internationally famous Brain Club. God wants you to decide at what stage in their life an introduction should take place.

Pondering on your task, you realise that this individual may have lost all confidence in their mental ability by the time they reach middle age. They may never even try the skills of the Brain Club, unless they are introduced to them at an early stage in their life. As a good angel, you therefore decide that these skills should be introduced early. Where better than at school itself.

After benefitting greatly from learning about Mind Mapping and how to use my brain, I decided to set up what was effectively a mini Brain Club at my school in Oxford, in England. That was a year ago. There are now 20 members, aged between 13 and 18 . We meet regularly to learn, practise, develop and even debate the feasibility of those skills on which the Brain Club is based.

It has been immensely satisfying for me to see so many fellow club members benefitting from disciplines like Mind Mapping, speed reading and positive thinking. It has been even more satisfying to witness the marked influence that the club has had on students and teachers in the "mainstream" of school society. Since I set up this club, many stu-

dents at my school now use techniques like Mind Mapping without feeling they need to become club members. In fact, the club seems to have become quite a topic of conversation among students and teachers alike.

I now realise the huge potential of similar clubs within school communities. Schools and colleges offer the personal contact and studious atmosphere that are essential if large numbers of people are to discover their incredible mental potential at a young age. I envisage a day, in the not-too-distant future, when all children will learn how to use their mind effectively and enjoyably as part of a school curriculum.

Until that day arrives, we must encourage as many students and teachers as possible to set up mini Brain Clubs within their school and college communities. In the event of such progress, the marvellous goal of having the whole planet brain conscious by the year 2000 will be far from a dream. It will be a reality.

If anyone has any suggestions or questions about Brain Clubs in schools, colleges or universities. please write to:

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## Journeys in a magic tunnel

MARIA Beyer and Klaus Marwitz have been running Brain Training and Mind Mapping seminars in Kiel in West Germany for the past three and half years.

An example of their work is Superlearning language courses. Students are introduced to relevant theories about the brain. Because pure theory can be boring, and is only remembered by the weak cognitive part of our perception, Maria says, students are guided through the use of inner training.
"Students imagine they are visitors inside their own head. They start on the left side of the brain. In this room are many figures, letters on the walls, a large clock, and the room is filled with linear furniture.
"In the centre of the room is a magic tunnel, called Corpus Callosum. When the body is relaxed the opening is large. In times of stress the opening gets smaller, which hinders the flow of information. The right side of the room is colourful. Students can see pictures and hear music. They get a chance to experience the theories behind Mind Mapping and
the elements of superlearning and relaxation techniques.

Similarly, the learning of vocabulary is supported by Mind Maps. In a lesson about food and restaurants, for example, students are encouraged to make Mind Maps of their discoveries. Students are then asked to review them in a wholebrained and associative way with a partner. This gives less talkative students a chance to talk about their Mind Maps with their neighbours, which unblocks their fears about speaking.

## Inner-space Mind Maps

'"Sometimes we conduct students through a large inner-space Mind Map. In a lesson about airports, for example, we mentally stroll around the airport. Each branch of the Mind Map is a new area of the airport," Maria says.

Maria and Klaus also teach management seminars. Delegates prepare Mind Maps of their speeches on paper the size of a business card. Afterwards students are encouraged to visualise themselves on a stage or in front of an audience, with the

Mind Maps in their minds. They imagine the scene: how they see the audience, how they are seen by the people. They hear themselves speaking, sense how they feel, and what the smells are in the room. This type of training is very successful, Maria says.
"We have also recently created a conference model. Members do Mind Maps of their ideas, and the goals and aims they intend to fulfil. Again they imagine themselves in front of the conference.,"

At the trainings, delegates' Mind Maps are exhibited and "read" by other members of the group. This latter approach gives delegates a chance to add to their Mind Maps, based on what they have seen of the neighbour's work.

## Equal opportunities

The advantages of this method are the elimination of long, often unsuccessful discussion groups. It also provides everyone in the group an equal opportunity to contribute.

Maria and Klaus have introduced "the brain" to West Germany on a wide scale. They teach Mind Mapping and "Superlearning" in most German-speaking countries.

As Maria says: 'I can't express strongly enough that if you use your brain in the way it needs to be served, your thinking ability will grow. Maybe it will some day be said that this is a way to find or develop a new kind of genius.
"We often hear that our seminars have totally changed the learning or working styles of our participants. That's what happened to me when I discovered Mind Mapping and how to use my brain almost four years ago," Maria said.

## POETRY CORNER

## Desiderata reconsidered

by Tony Buzan
Judge your position amid the noise and haste, and realise what exhilaration there may be in the balancing of relationships. Be able to be on all terms with all persons, knowing your base and the bases from which you speak to them and they reply. Speak your truths as they must be spoken; and listen to others, for there are no dull and ignorant people, only those who have different ways. Draw energy from loud and aggressive persons, for they are driven by a force, and your spirit has an infinite capacity to understand. Compare yourself with others in order that you may realise differences, that each is unique, and that there is no advantage in terms that divide us into greater and lesser. Enjoy your achievements as well as your 'failures'; they are similar elements considered in a different light. Remain true to your own interests - they are your definitions as you travel the undulations of Time. Exercise awareness in your business affairs balancing them with the rest of your life; your possible choice of mazes has no limit. Know that all persons strive for ideals; and everywhere life is full. Be yourself. Be open about your ideals, for in the face of all possibility and change, change is the true constant in the Universe. Take wisely the fluctuations and offerings of time, treasuring the things of your youth and your past, for you are what you have been and are being and will be. Nurture strength of understanding to shield you from the danger of believing that there can be misfortune. And gain energy by nurturing your imagination. Many beautiful things are born of rest and solitude; Be with yourself as you must be. You are a messenger of the Universe. All beauty lives within you.

## BRAIN STORM Requests for golden rules

Tony Buzan will answer your questions about the brain and related areas in each issue of Synapsia.

Synapsia: Do you have a golden rule for living? A formula or tip on how to get the best out of your brain?

Tony Buzan: A number of golden rules.

1. Believe in your brain and its capacity.
2. Study it at every level, from its bio-physiology and neuro-chemistry to its range of mental skills.
3. Cherish it.
4. Use it.

As da Vinci said, in his own laws for developing a "complete" brain:
a. Study the science of art.
b. Study the art of science.
c. Learn how to see/develop your senses.
d. Practise the previous three in the context of the realisation that everything connects to everything else.

By learning how your own brain works, you will simultaneously be encouraging it to perform better. For example, when you learn and fully realise that one of your brain's prime "skills" is imagination, combined with association, the mere fact of knowing will automatically set your brain on a path in which it will use these two skills more.

To enhance this process, it is useful, once you have learned about the basic and extraordinarily subtle mechanics of your brain to learn specific skills such as Mind Map-

ping, memory, creative thinking, reading and the full range of physical skills. The more you learn about your brain and about how to use it well, the more you will create a positive spiral in all areas of your development.

Synapsia What's the difference between long-term and short-term memory and how can I best develop each?

Buzan: Short-term memory is that aspect of your memory skills which immediately registers information and which often, in a "short term", files it in the immediately non-recall section of your brain.

For example, you may often have been given a telephone number and forgotten it within two minutes, or have been introduced to 10 people and forgotten their names within seconds of being introduced to the tenth. Long-term memory is that memory which is so "automatic" that many people don't even notice that it is memory. For example, every word of every language you daily speak is a function of your long-term memory. It is also an example of the incredible ongoing power and accuracy of this mental skill.

Your name, the vast range of your "standard" knowledge, and your memory of environments and routes are also part of your long-term memory. Both short-term and longterm memory can be improved by practising your powers of concen-
tration, association, imagination, and by, as da Vinci suggested, developing each of your senses. When developed in such a way, each helps the other, and all help you!

Synapsia: Can I improve my brain through improving my diet?

Buzan: Modern research would certainly suggest so. The more we have realised the incredible chemical complexity of your brain (estimated to contain more than one million chemical reactions per second), the more we have realised the importance of nutrition (the chemical fuel) on mental processes.

A good brain-food diet would include daily fresh food, an abundance of vegetables and fruit, and appropriate portions of unprocessed and relatively "wild" fish and meat, depending on the individual's personal tastes, preference and philosophy. It is also important to have a varied and balanced diet, and to monitor your weight and energy levels.

Synapsia would love to publish your questions and Tony's answers. Send your questions (by March 1 for the next edition) to:
Synapsia Q\&A

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## SUCCESS STORY Why Lana was the toast of Sydney


#### Abstract

A CHANCE meeting with Tony Buzan's book Use Both Sides of Your Brain (the US version of Use Your Head) has made American schoolgirl Lana Israel a celebrity in Australia, and led to her gaining a prestigious publishing contract.


Lana, aged 13, was the star of a world conference on gifted children after she gave a presentation on Mind Mapping. Tony had encouraged Lana to demonstrate the technique at the conference, and use them in a book she wrote.

It all started so simply. In December last year Lana was looking for a subject to enter for her school science project. Lana is a student at Highland Oaks Middle School in Dade county, Florida, in the US. She found a copy of Use Both Sides
of Your Brain on the kitchen table. The information on Mind Mapping fascinated her and she decided to run a series of experiments using her peers as subjects. She set up an experimental and a control group.

The results in the areas of recall and creativity excited her. She found a marked improvement among the group who used Mind Mapping. Her project won first place in the county junior biology division and qualified for state level competition, where she placed second against 42 entries.

From this project Lana evolved a vision. Her dream is to change the face of education worldwide. One of her former teachers, Amanda Morgan-Hagan, read about Lana's competition success and invited her to the 8th world conference on gifted
and talented children in Sydney, Australia in July. Said MorganHagan: '"Lana showed me what she had done and I suddenly thought this would be marvellous for the conference and a wonderful presentation for world educators to hear.' ' Lana believing that this conference would help advance her vision, submitted an abstract and it was accepted. She also wrote a 44-page booklet for the conference which she called Brain Power for Kids: How to become an instant genius.

Lana's reception in Sydney was outstanding. She appeared on several national television programmes, gave numerous radio talks and was interviewed by many of the leading daily newspapers. Her book received national exposure. Hundreds of letters arrived at her home address from people wanting to buy the book. An Australian publisher asked for the production rights for Australia and New Zealand, and a contract was signed earlier this year.

Said Lana: "Mind mapping has helped me so much I want to share that knowledge with other people."


# London Brain Club founded 

by Jane Mitchell

FOUNDING members of the London Brain Club have been meeting regularly since May this year to "wake the sleeping giants of their brains".

The Brain Club is open to all people who wish to gain access to the brain and learn to use it well. It differs from similar organisations because of the active interest of its members in learning how to learn and the sharing of specific skill areas. It is stimulating and fun to meet other like-minded people.

But the Brain Club is much more than an opportunity to socialise. The first meeting was held at London's Hospitality Inn on 15 April 1989. Thirteen people from the London area met under the guidance of Vanda North, Inter-
national Director of the Buzan Centres. It was decided that meetings should be held initially once a month on the third Saturday of the month.

Four eager people turned up at the communication and learning skills centre in Putney in May. It was decided to define goals as a group, make a time plan, and provide time for relaxation. As we talked about our interests several people listed ice-skating as a hobby. An outing was arranged, which proved to be a great success -- a chance to stimulate physical as well as mental abilities.

Aims of the London group are to:

* learn how to learn;
* learn the organic study method;
* develop observation skills;
* work through the yearly plan;
* test ourselves and see how we are doing;
* report on projects, progress
made, and rainbow grades;
* talk and discuss items;
* watch the Use Your Head video;
* discuss note-taking skills;
* practise exercises in multisensory development.

A pyramid system was set up to contact other members of the Brain Club to inform them of forthcoming meetings. Each meeting will follow a timetable. The meeting plan is:
4.30: Objectives; introduction of new people; make timetable 5.00: 5-minute break
5.05: Main topic, including a break determined by the speaker
6.30: 15-minute break
6.45: Review
7.45: End and possible outing

Interested people are welcome to attend one meeting on an introductory basis. For information, telephone: 01-788 8900.

## EDUCATION UPDATE

by Vanda North

IN THIS column we would like to know how your educational institution, college, school or university has incorporated "learning to learn'' brain skills into the organisation.

Since Tony Buzan's book and nine-part BBC TV series Use Your Head appeared 15 years ago there has been a steadily growing interest in teaching Mind Mapping and/or the use of "learning to learn" skills. Students around the world have reported considerable success in developing these skills. Some of the schools and universities include:

* Cambridge University, Cambridge England
* Norfolk Academy, North Carolina, USA
* Kitsilano High, Vancouver, Canada
* The Super-Teen Camp, Malaysia
* Hallonbergsskolan, Sundbyberg, Sweden

These successes attest to the effectiveness of developing techniques that provide an "owner's manual"
for the brain. The Brain Club plans to begin some major educational projects. We are looking for a number of schools and educational institutions already using Mind Mapping and other advanced learning techniques. To this end we need:

* educational and training businesses willing to organise learning to learn research
* schools and educational institutions that are
willing to participate in research and documentation of the effectiveness and relevance of the "learning to learn" process
* Doctoral or Masters thesis students willing to pre/post test and document the results

For more information, please contact:

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For information on brain training and brain training material contact

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[^0]:    Published by the Buzan Centre
    Suite 2, Cardigan House
    37 Waterloo Rd, Winton
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    Phone: 0202-533-593 (inside the UK)
    +44-202-533-593 (outside the UK)
    All contributions for the Spring edition should reach the editor, at the above address, by March I. The editor reserves the right to shorten, amend or change any contribution accepted for publication. If you would like articles returned, please include an addressed envelope with appropriate postage.

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    Designed and edited by Stephen Quinn on Aldus PageMaker version 3.0 using Wang WP and a Wang LCSI 5 printer. Printed by Delco Printing Company Ltd 1\&2 Bellingham Trading Estate Randlesdown Road, London SE6 3BT. Phone: 01-697 8838 Fax: 01-461 4289

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