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# SYNAPSIA

THE INTERNATIONAL BRAIN CLUB JOURNAL  
Volume 3 Winter 1993 Number 4



Integration by Lorraine Gill

## In this issue

- Dr Hariman's recipe for success against all odds!
- Brain Trust Brains of 1992, plus the winner
- Update on the search for ET
- A musical first
- Future learning and working environments analysed
- Portrait of a genius

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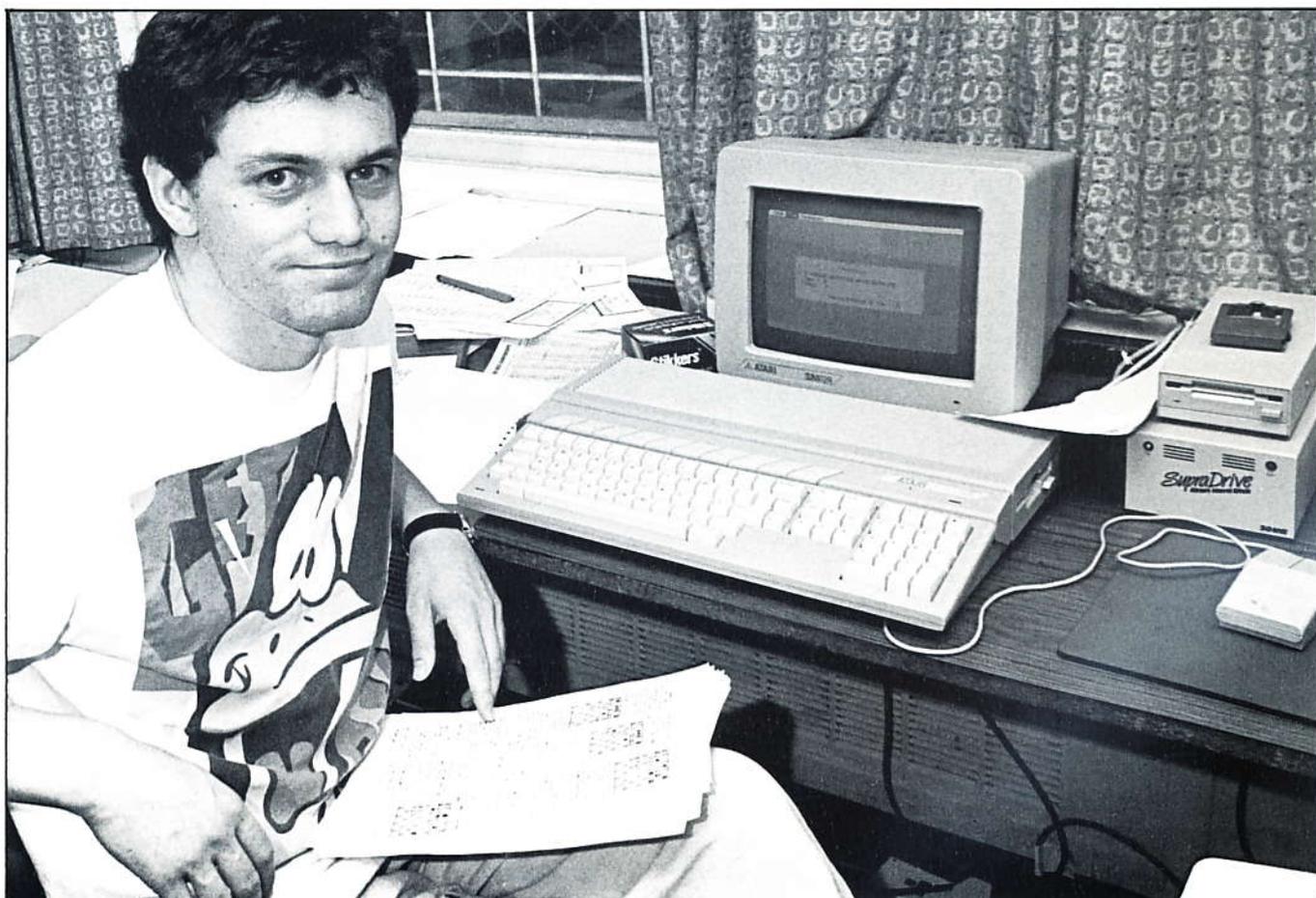
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**SYNAPSIA Vol 3  
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Lady Mary Tovey

**Cover**

Lorraine Gill

**Cartoonists**

Pécub

Kirsty Hurst

**Published by**

The Buzan Organisation Ltd

c/o Suite 2/3

Cardigan House

37 Waterloo Road

Winton

Bournemouth

Dorset BH9 1BD

Tel: (0202) 533593

(inside UK)

+44 202 533593

(outside UK)

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Mind you remember!

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BTB finalist Dr Tinsley



## EDITORIAL

**W**e start the New Year with a feature by Australian psychologist Jusuf Hariman, whose life story is an inspiration. His offer to help **Synapsia** readers in their efforts to realise their own potential is one that should be grasped.

The ten Brain Trust Brain finalists are a splendid group of high achievers, and choosing the winner from such a glittering assembly was a daunting task. Read on and find out who has won the title for 1992.

**Mental World Records** details the record-breaking feats of the globe's strongest chess players, two of whom appear in the present Brain Trust Brain final listing. Could it be that one day England's Nigel Short will occupy the top slot?

**Intelligence about Intelligence** provides more observations on the chances of hearing from ET. Read what the experts think.

There is a confidential report on The Great Duck Race in **Brain Club News**, and we learn that the next Brain Club University will be held in the fount of Western civilisation. How appropriate!

The **Check Mate** position records a famous missed opportunity. It is rare to have a matchplay situation in which the winning stroke is required to save the game, as here. Unfortunately for the master concerned, he could not find the right move and so resigned! Can you spot the answer?

Ben Zander gives readers a lesson on musical interpretation, and points out that this constitutes a 'first'. Read **Sing-along-Zander** to discover why.

Our book review column opens with an appraisal of **Brain Sex** that was sent in by Brain Club member Brenda Barrett. Brenda claims that she has never before written a book review, so this is another 'first', and what a good one! I am sure that the new Editor will welcome more reviews by readers - remember, **Synapsia** is your magazine.

**Amazing Memory Stories** presents a medley of those who believed and acted upon their dreams. Lana Israel's **Quote of the Quarter** is therefore particularly apt, as is Lana's account of her ascent to business success after she had read a certain colourful book. Can you guess the author of this 'open sesame' volume?

After our **Poetry Corner** and **Your Letters** comes an interview with Superintendent Brand of the Metropolitan Police. His description of the value of Mind Mapping to his profession is enlightening.

Howard Gardner completes his thesis on intelligence by explaining the philosophy at the heart of his educational ideas. In the School of the Future the pedagogic emphasis would change every seven years, "...from pre-birth to age 28." Education is envisaged as an on-going process, with 'horses for courses' as the golden rule (lessons 'individualised' rather than 'standardised'). Essential to this future school environment would be finding the right balance for each student between formal learning and the more intuitive, exploratory areas of study. Dr Gardner ends by outlining what is needed for a better functioning workplace.

This essay should be compared with Ken Blanchard's pronouncements on teaching (set out in the Summer and Autumn editions last year) for fascinating correspondences.

Brian Timmins concludes his exposition on Go with the rules and strategy, and Mowgli continues to delight us with his feature **Animal Intelligence**.

Ray Keene's psychological study of Brain Trust Brain finalist Bobby Fischer is a revelation. It is clear that the talents of this controversial chess genius extend beyond the chequered board, and that a champion's dedication need not stifle accomplishment in other fields - refer to the Fischer clock.

Following this intriguing article is a piece by the outgoing Editor that

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corretti. Con femina diligetia emédati,  
da molti famosissimi Giocatori. In  
lingua Spagnola, & Taliana.  
Nouamente Stampato.



poses two questions: who was Knight Errant, and can you solve his problem? There is a prize for the reader who can, and is first 'out of the hat'.

In conclusion, Lorraine Gill describes her intricate and mystical cover painting... and we learn that the conclusion leads to a new beginning.

After a fulfilling year as Editor, I have had to resign the post in order to provide full-time care for a disabled relative. Editorial responsibility passes to Byron Jacobs, who has already typeset the last two issues, and all articles and correspondence should be sent to him at:-

**23 Ditchling Rise**

**Brighton**

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*Dr Strigner's theory about calories, and his review of **Dine Out and Lose Weight**, have been held over for the next edition because of some last-minute 'fine tuning' by the author. -Ed.*

### THE BRAIN CLUB CHARTER

The Brain Club was incorporated on May 15th, 1989, and became a registered charity on November 23rd, 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.

# HOW TO WIN AGAINST ALL ODDS

## Knowledge on Tap

### Dr Jusuf Hariman BCM 638



This month we lead with the story of Dr Hariman, a true cosmopolitan in that he is Chinese with an Indonesian name, and is a renowned Australian academic! Jusuf Hariman's cerebral achievements are legendary, and he is actively seeking to help others develop their mental potential.

The author has dedicated this autobiography to Tony Buzan, whose books, videos and cassettes were a major factor in Dr Hariman's efforts to win against all odds.

**H**ello! I am a 38-year-old registered psychologist, corporate accountant, business analyst, writer, and a fourth year law student at Macquarie University in Australia. I was given special permission to do the first three years of law in one year (I doubt if this concession has been granted before). I finished with **A** grades apart from one **B**, the law prize as the best student of 1991, and I was awarded 100% for legal debate. This was the first time in the history of the university that anyone had achieved total marks for that subject.

I have written over 80 works on psychotherapy and management, and my name is listed in leading *Who's Who* publications, including **Who's Who in Australia**.

As you will note shortly, these achievements did not come easily to me. I have been suffering from cancer and all types of headache. X-rays show that the bones of my neck are degenerating, giving rise to excruciating pain,

and I suffer from a severe form of hypogonadism, the effect of which is similar to extreme diabetes (I feel like fainting all the time). I also need weekly medical treatment, and I am under medical observation for life.

### What do I Offer?

I therefore have strong personal reasons to make you, the readers of **Synapsia**, the following offer: I shall answer all questions on **How to Win Against all Odds**, *absolutely free!* When writing to me, please enclose a photograph of yourself, your CV, and two international reply coupons. Please indicate if you would like **Synapsia** to publish your contributions, and I shall then submit the most interesting cases to the Editor. My address is given at the end of this article.

### Against all Odds

Ever since I was born, the cards have been stacked against me. My birth was extremely difficult, and I had to be induced artificially. As a result, my head was long, making me resemble some of the creatures in the **Star Wars** movies! Fortunately, after a few

hours the shape of my head normalised.

My childhood was a constant horror story. **While everyone else at school could read and write, I was not able to do so.** With the benefit of hindsight, my doctors have suggested that the problem was dyslexia. My performance in primary and secondary schools was very poor, and even with extensive private lessons, I barely passed exams. My stamina was also extremely poor, and school PE lessons were often real hell.

When in 1974 I went to Australia and did a Victorian HSC, the results were between 30%-50%. So, I moved to New South Wales and studied psychology at Macquarie University, which accepted me on the basis of my Indonesian HSC. (In those days, psychology was one of the easiest courses to enter.)

My health was always poor - flu and colds are constant companions to this day. I also stammered very badly, and when later on I practised psychology and treated stammerers, I realised just how badly I stammered at that time. I was afraid of everything, and my self-

esteem was virtually zero. This situation was exploited by aggressive students who constantly bullied me, and 'borrowed' my money with no intention of returning it to me.

I have had testicular cancer and, in addition to the headaches and hypogonadism mentioned before, I suffer from kidney trouble, frequent heart tremors and arthritis. Even now, I cannot write intensely for over 15 minutes without severe pain in my hand. Yet, despite all these problems, I have five university degrees in psychology, philosophy and accounting!

### Despite all Odds

Before explaining how I achieved this transformation, here are two of my accomplishments.

1 In 1982 I founded the **Journal of Integrative and Eclectic Psychotherapy**, and in 1983 I founded the International Academy of Eclectic Psychotherapy, the first eclectic journal and academy in the world. The editorial board of the journal consists of professors of medicine, psychology and psychiatry from reputable universities such as Cornell and Harvard. **Who's Who in Australia** and **Who's Who in Australasia and the Far East** list me as the founder of the fifth force in psychotherapy, ie, integrative-eclectic (after psychoanalytical, behavioural-cognitive, existential-humanistic and transpersonal). The academy has members in 24 countries, and will have a major international congress in France next year.

2 One of my publications is **Influencing Rather than Informing: Japanese Management Accounting**. It was published in the March 1990 edition of **Management Accounting (UK)**, and is in the closed reserve section of Macquarie University library, for use by final year finance students. It is the third article in English on the topic, the first being by an Australian accountant. I am currently writing my 82nd work **Winning All the Way**. I have recently completed two book-length manuscripts called **The Art of Corporate Warfare** and **Leadership Success**

through Self-Hypnosis.

### How did I do It?

The turning point in my life occurred in 1975, when I was an undergraduate at Macquarie University. I then discovered various memory and self-improvement techniques, and spent 30 to 180 minutes per day drilling myself in them, self-hypnosis being my favourite.

Among the mnemonic techniques, I particularly liked those detailed by Harry Lorayne and Tony Buzan, but the self-hypnosis books by other authors were not helpful. So I invented my own form of self-hypnosis, which combines Western self-hypnosis with other techniques such as meditation, *chi kung*, behaviour modification, rational emotive therapy, and so on. In 1981, Thorsons, a UK publisher, published the result under the title **How to Use the Power of Self-Hypnosis?**

The effect of all this was slow but immediate, and my intelligence has continued to rise ever since. In 1977 I obtained my first degree (BA), and up to 1986 it was followed by four other degrees. Also in 1977 I won the Dale Carnegie Essay Competition, which allowed me free admission to the Dale Carnegie course. In 1984 I won the Accounting Essay Competition at the University of Sydney, and in 1992 I won the law prize from Macquarie University.

I might add that, as part of my daily drilling, I use a lot of affirmations. My favourites are:-

- 1 You have to be right as well as different. **Jusuf Hariman.**
- 2 Lord, give me victory, or give me death. **Jusuf's prayer.**
- 3 How can I sell myself? What is my best repository? What is my best means of expression?
- 4 "Nothing can resist the human



will that will stake even its existence on its stated purpose." **Disraeli.**

5 Go into emptiness, strike voids, bypass what he defends, hit him where he does not expect you. **Ts'ao Ts'ao.**

6 "Victory - victory at all costs, victory in spite of all terror, victory, however long or hard the road may be." **Churchill.**



### Conclusion

I would like to assume the role of honorary adviser to Brain Club members, so why not let this 'old warrior' help you achieve more success in life? **Your success will be my reward! ■**

Dr Hariman can be contacted at:-  
**Macquarie Centre**  
**PO Box 1688**  
**North Ryde**  
**NSW 2113**  
**Australia**  
**Tel (02) 887 2118**

*In view of all that the author relates above - his triumph over adversity parallels that of 1992 Brain Trust Brain finalist Stephen Hawking - I hereby nominate Dr Jusuf Hariman for the 1993 Brain Trust Brain award. -Ed.*



# BRAINS OF 1992

## Who Wins the Palm?

The Brain Trust announce the finalists for the 1992 Brain of the Year.

**THE BRAIN TRUST**, a charitable organisation dedicated to research and the dissemination of knowledge about cognition, learning and the brain, are pleased to announce the finalists for the 1992 Brain Trust Brain of the Year Award.

The award, which has in previous years been given to Garry Kasparov, the World Chess Champion, Sumo star Chiyonofuji and Gene Roddenberry, the engineer and polymath who masterminded the *Star Trek* empire, is given annually to the global individual who best meets the following criteria:-

- 1 The candidates must be pre-eminent in their chosen field of endeavour.
- 2 The candidates must have contributed major new creative developments to their field of endeavour.
- 3 The candidates must have made a notable effort to educate others in their chosen discipline.
- 4 The candidates must have incorporated the principle of *mens sana in corpore sano* (a healthy mind in a healthy body) in their lives.
- 5 The candidates must have exhibited persistence and stamina over time.
- 6 The candidates must have been alive in (at least part of) the year of nomination.
- 7 The candidates must have demonstrated a general cultural awareness.
- 8 The candidates must have demonstrably contributed to their society.
- 9 The candidates must have demonstrated a concern for humanity.
- 10 The candidates must be active and known on a global level.
- 11 The candidates must be a good role model for those in their field and for youth in general.

### The Current Leading Nominees

The current major contenders for The Brain Trust Brain of the Year 1992, listed in alphabetical order, with brief summaries of the reasons for their nomination, are as follows:-

**1 BOBBY FISCHER**, the American chess genius and former World Champion, who at the age of 49 returned from an absence of 20 years to the chess arena and defeated Boris Spassky, the previous World Champion, and still an active player.



**2 WILLIAM (BILL) GATES**, the Microsoft founder and computer whizz kid. At the age of 36 he is a multi-billionaire who reigns over the world's biggest personal computer software company. He is famous for his super-power memory, and for his motto "I can do anything I put my mind to."

**3 STEPHEN HAWKING**, astronomer and physicist extraordinaire, ranked by many with Einstein. His book *A Brief History of Time* topped the British Best Seller lists for 200 weeks, an all time record. In theory he should have died 25 years ago. His on-going survival, attributed to his vision and mental stamina, is a prime example of *mens sana in corpore sano*.



**4 GARRY KASPAROV**, 1991 Brain of the Year, and still masterfully dominant in the world of chess. By the completion of 1992 he had smashed his own all-time record in chess ratings, not only breaking the 2,800 barrier, but achieving a rating of 2,805 on the ELO scale. He has stretched his lead over his nearest opponents from 55 to an incredible 80 points - the equivalent of a marathon runner beating all the world's other top runners by more than five minutes!



**5 NIGEL KENNEDY**, controversial classical musician, who through his brilliant and entertaining violin playing brought the 'Classics' to millions. This year, in the annual 'Top of the Classical Pops for the Year' ratings, he had three of his recordings in the final top 10.

**6 DOMINIC O'BRIEN**, the first World Memory Champion, has maintained his dominance of the Memory World since winning the championship in 1991, setting in the process new World Records for the perfect memorisation of a 52-deck pack of cards in 2 minutes 29 seconds. At the end of 1992 he established a new World Record of 55.64 seconds. He has become an international

'Brain Star' appearing regularly on television and radio, and recently memorised all 7000 answers to the new **Trivial Pursuits**. He is known for his insistence that the brain is a Mental Muscle anyone can train.

**7 JUDIT POLGAR** last year became the world's youngest-ever chess Grandmaster at the age of 15 years, 4 months and 28 days. In so doing she broke the 'unbeatable' record of Bobby Fischer (nearly matched by Garry Kasparov, the current World Champion) of 15 Years 6 months and 1 day. Since that time she has raised her ELO chess rating to 2595, the highest rating ever for a female chess player. She is known for her ebullient, compassionate and out-going personality.



**8 CARL SAGAN** is the 'Astronomer Royal' of the United States, and through his best selling books and his world renowned television series, he has brought astronomy further to the forefront of the world's stage. He was voted by a poll of the readers of **Parade Magazine** as the 'smartest person in the United States'. This year he was notable for his leadership of the massive new search for Extraterrestrial Intelligence.

**9 GANESH SITTAMPALAN.** In 1992 the 13-year-old maths genius Ganesh became one of the world's youngest-ever university graduates. A general all-rounder, Ganesh is already preparing to complete his doctorate.

**10 MARION TINSLEY.** In 1992 Dr Tinsley, the 65-year-old Professor of Mathematics from Florida, dominated the game-playing environment. He is already a legend due to the fact that he has been the world's number one in draughts since 1954 - a 38-year-reign that makes him the longest reigning champion of any sport in history. This record was enhanced by the fact that in all that time, in thousands of championship matches, he had lost only five games. In 1992 Dr Tinsley excelled even himself. He took on the world's valid number two challenger - a computer. The computer, Chinook, was capable of computing three million moves a minute, and had a database of 27 million positions. It had dominated all other draughts players. Dr Tinsley accepted the challenge, and under the sponsorship of the Mind Sports Olympiad beat the super-computer in a match that lasted 39 games played over two weeks, eight hours per day. Dr Tinsley proclaimed his win "...a victory for human beings!"



## 8 Additional information

The Brain Trust will be delighted to receive nominations for

the 1993 award from viewers/listeners/readers/friends, and will also help with the preparation of programmes, articles and competitions surrounding this annual event.

The winner of the Brain Trust Brain of the Year was announced at a special Press Conference held at Simpsons-in-the-Strand, London, long - standing Mecca for game-players and Warriors of the Mind, at 10.00 am on Sunday, 11th April 1993. The prize was given by The Brain Trust.

The announcement was followed by a four-game speed chess match between a leading junior player and Tony Buzan. The Brain Trust offered £400 in prize money, and the winner's cheque was presented jointly by Sir Brian and Lady Mary Tovey, Grandmaster Raymond Keene and Tony Buzan. Refer to Stop Press on page 35 to discover the Brain Trust Brain of 1992!

**For further information please contact:-  
The Brain Trust, The Harleyford Manor Estate,  
Marlow, Buckinghamshire SL7 2DX  
Tel 0628-482765 Fax 0628-486545**

**Synapsia wishes** to include in its annual Honour Roll for great brains, the following who died in the past year:-

### 1 ISAAC ASIMOV - 1920-1992

Isaac Asimov was the most popular science and science fiction writer for more than 40 years, and wrote nearly 500 books on a polymathic range of subjects. Famous for his development of the 'Laws of Robotics' he said of himself: "I have been fortunate to be born with a restless and efficient brain"

### 2 ALEX HAILEY - 1922-1992

Pulitzer Prize-winning author of **Roots**, a mix of painstakingly researched fact and imagined fictional detail tracing his ancestors back to a village in Gambia, West Africa, where they originated.

The television series adapted from his book drew 130 million viewers, at that time the largest audience in television history.

### 3 REG HARRIS - 1920-1992

Described as arguably the greatest sprint-cyclist ever, Harris, a multiple world sprint-cycling champion, was a worthy hero of every British schoolboy. His riding was a combination of brilliant tactics, power and grace - a perfect union of man and machine.

He broke all the 'laws' of cycling and athletics by maintaining that at the age of 50 he could come back and win the World Championship. He did.

### 4 OLIVIER MESSIAEN - 1911-1992

The celebrated avant-garde French composer who based most of his music on bird song. A superb organist and a dedicated teacher, he was a major influence on Stockhausen.

### 5 SATYAJIT RAY - 1922-1992

Versatile Indian film maker whose 'Apu' trilogy of a Bengali childhood, youth and manhood was one of the most luminous series in film history. The first film of his spare and sensitive tryptich - **Trip to Pather Panchali (Song of the Road)** - won a special jury at the 1956 Cannes Film Festival. It also won 15 other international awards, and is considered by many experts to be one of the best films ever made. ■



# MENTAL WORLD RECORDS

## JANUARY 1993 WORLD CHESS RATINGS - ALL PLAYERS Kasparov Smashes Record!

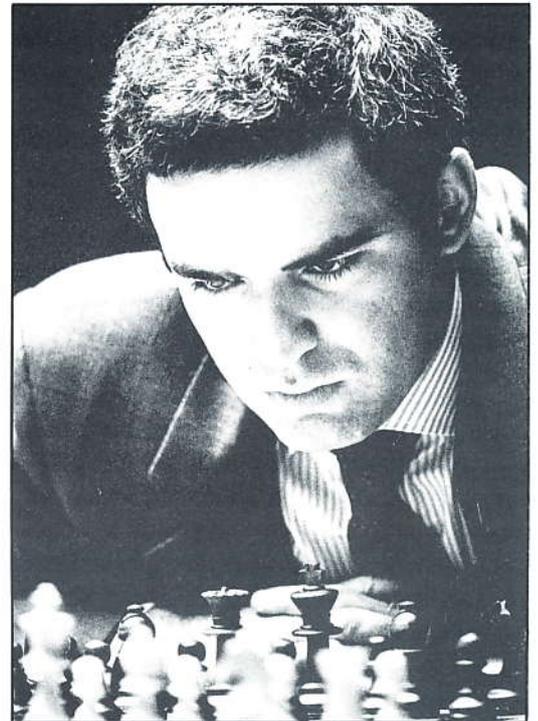
In *Synapsia*, Volume 2 numbers 3 & 4, the January 1992 ratings showed that Garry Kasparov, although still dominating the world field, had slipped from his all-time high ELO rating of 2800 to 2780 while still leading the number two, Anatoly Karpov, by a massive 55 points.

The January 1993 ratings show Kasparov once again smashing his own record, with a new all-time high rating of 2805. In so doing he has also stretched his lead above the number two Karpov to an unprecedented 80 ELO points. To compare this accomplishment with runners, Kasparov's lead over the field is equivalent to the world's number one marathon runner smashing a field composed of the next best runners in the world by over five minutes!

Most notable among the new entries and large advances are the entry of Vladimir Kramnik, the young Russian player, who leaps in at number 6, and Kiril Georgiev, the Bulgarian who comes in at number 9.

Close behind these is the new number 11, Zurab Azmaiparashvili from Georgia, and Joel Lautier, number 14, the pride of France, and touted by many as one of Kasparov's future challengers.

Two other new entries include Veselin Topalov at number 17, and the brilliant young English player Michael Adams, who rises from number 43 in the ranks to enter the top 20 at number 20, this high rating not including his recent superb performances in speed and knock-out tournaments in which he placed first.



### TOP 20 MEN: WORLD CHESS RATINGS - JANUARY 1993

RANK	NAME	TITLE	COUNTRY	RO	GAMES
1	KASPAROV, Garry	g	RUS	2805	18
2	KARPOV, Anatoly	g	RUS	2725	23
3	IVANCHUK, Vassily	g	UKR	2710	37
4	ANAND, Viswanathan	g	IND	2710	31
5	GELFAND, Boris	g	BLA	2690	19
6	KRAMNIK, Vladimir	g	RUS	2685	27
7	SHIROV, Alexei	g	LAT	2670	18
8	BAREEV, Evgeny	g	RUS	2670	8
9	GEORGIEV, Kiril	g	BUL	2660	65
10	SALOV, Valery	g	RUS	2660	9
11	AZMAIPARASHVILI, Zurab	g	GEO	2655	44
12	KAMSKY, Gata	g	USA	2655	30
13	SHORT, Nigel	g	ENG	2655	25
14	LAUTIER, Joel	g	FRA	2645	58
15	YUSUPOV, Artur	g	GER	2645	13
16	SOKOLOV, Ivan	g	BIH	2640	54
17	TOPALOV, Veselin	g	BUL	2635	79
18	TIMMAN, Jan	g	NED	2635	24
19	POLUGAEVSKY, Lev	g	RUS	2635	20
20	ADAMS, Michael	g	ENG	2630	59

Notable falls among the top 20 include Artur Yusupov, who plummets from number 9 to number 15, due in part to his semi-final candidate's loss to Jan Timman.

Nigel Short falls from number 4 to number 13, not because of a real loss of form, but due to his focus on preparing for his dramatic semi-final victory over Anatoly Karpov, and his extensive preparations for the final candidate's match against Jan Timman.

In January of this year Short defeated Timman convincingly in this encounter, and will now play the World Champion for his title. Nigel is the first Briton to get this far for over a hundred years, and in doing so becomes Britain's first chess millionaire. Ray Keene is preparing a report of the match for *Synapsia*, so stay in touch!

## JANUARY 1993 WORLD RATINGS - WOMEN

As the new ratings have a new record-breaker in Garry Kasparov, so the world's womens' ratings have a new record-breaker in 'Brain Star' Judit Polgar. As well as having recently become the youngest-ever chess Grandmaster at the age of 15 years 4 months and 28 days (see **Synapsia** Volume 3 number 1, page 17) Judit heads the January 1993 World Womens' Rankings with the highest-ever ELO score of 2595. This rating, which appears set to continue to rise rapidly, also makes Judit history's highest ranked womens' player in the overall listing at joint 53rd. Many experts are predicting that within the next two years Judit will be the first woman ever to break into the world's top twenty, that group being so strong that every one of them would rank in the top 100 of all-time chess-playing greats.

Notable changes in the January 1993 rankings include the fall of Svetlana Matveeva from the top 10 to number 17, and similarly the unexpected fall of the third of the Polgar sisters, Sofia, from number 10 to number 14.

To compensate for this, Zsuzsa Polgar switched places with Pia Cramling to make the Polgar sisters comfortably and dominantly the world's number one and two in womens' chess.

### TOP 10 WOMEN: WORLD CHESS RATINGS - JANUARY 1993

RANK	NAME	TITLE	COUNTRY	RO	GAMES
1	POLGAR, Judit (GM)	g	HUN	2595	21
2	POLGAR, Zsuzsa (GM)	g	HUN	2560	37
3	CRAMLING, Pia (GM)	g	SWE	2525	49
4	CHIBURDANIDZA, Maia (GM)	g	GBO	2510	41
5	XIE, Jun (IM)	g	CHN	2470	42
6	IOSELIANI, Nana	g	GBO	2460	32
7	GALLIAMOVA-IVANCHUK, Alisa	g	UKR	2445	35
8	ARAKHAMIA, Ketevan	g	GBO	2440	28
9	PRUDNIKOVA, Svetlana	g	RUS	2420	35
10	KAKHIANI, Ketevan	g	GBO	2420	20

Judit Polgar



Notable rises included Ketevan Kakhiani who jumped from number 20 in 1992 to number 10 in 1993, Svetlana Prudnikova who came from outside the top 20 to leapfrog Kakhiani at number 9. and Alisa Galliamova-Ivanchuk who appears at number 7. Being married to the world's number 3 could explain how Alisa has, in only one year, increased her rating by at least 75 ELO points. Husband Vassily paid the travelling expenses of the Ukrainian ladies team, so a financial element can be said to feature in this development. With this kind of support aiding her natural talent, she can evidently go right to the top of womens' chess. ■



# INTELLIGENCE ABOUT INTELLIGENCE

## The Latest Intelligence on ET Intelligence

Tony Buzan BCM I

Following on from the last issue's major feature on extraterrestrial intelligence, we investigate the possibility of life on other worlds. Readers may have seen Channel 4's *Equinox* programme *ET, Please Phone Earth*. It was shown on 20th December last year, and featured many of the people and places to be found in *Synapsia's* celebration of the massive search for ET now in progress.

A healthy argument is raging about the number of possible civilisations in our local Milky Way Galaxy, and it has been heightened by recent investigations.

If optimistic assumptions are to be made about the likelihood of intelligence arising on other planets, it coincidentally turns out that the number of such civilisations in our Milky Way today should be about the same as the average life time of each civilisation in years (roughly equal to the life time of the star around which the civilisation was born).

Those who are very optimistic argue that once a civilisation such as ours develops, it could last as long as that parent star - probably for hundreds of millions of years. Assuming an even spread of civilisations, and assuming that the typical life time of a civilisation to be more than a 100 million years, then there should be at least one civilisation within 50 light years of us.

This estimate is based on five basic

assumptions:-

- 1 That life and technological civilisation are an inevitable outcome of the physical laws that govern the Universe.
- 2 That Earth is a typical, run-of-the-mill planet.
- 3 That the laws of physics we know about are essentially complete.
- 4 That radio communication is the obvious way to get in touch with other civilisations.
- 5 That other civilisations will be eager to contact 'newcomers' such as ourselves.

A very specific and 'small' search by D G Blair of the University of Western Australia has failed to find any such evidence of our immediate galactic neighbourhood.



Blair and colleagues use the Parkes radio telescope to listen at a 'special' frequency: 4.462336275 gigahertz. They selected this by multiplying the frequency of the natural emission of hydrogen, the simplest and most abun-

dant element, by Pi, the first fundamental constant likely to be discovered by any civilisation. The observations were made during two periods in 1990 and 1991.

Blair and his team looked for such radio beacons in the neighbourhoods of 176 stars within 40 light years of Earth. Most of the stars were of spectral class F, G, and K, and were similar to our own Sun. Only one star showed a narrow emission line in the right frequency, for a few hours in 1990, but this was a weak feature and the astronomers could not find it the following year.

According to Blair and his colleagues, their observations to date already seem to rule out the possibility that extraterrestrial civilisations, if they exist, survive more than a 100 million years once they are established. The work also casts doubt on at least one of three basic assumptions: a technological life is inevitable given an Earth-size planet near a Sun-like star, radio communication is the obvious way to get in touch, and/or that other civilisations want to get in touch with us.

Counter arguments point out that this 'special' frequency may have been too special, and that to make sweeping assumptions based on such a tiny fragment of evidence is unrealistic.

In response, Blair and his team plan future searches of more stars using improved techniques.

To find out whether they do indeed tune in, stay tuned to **Synapsia!** ■



# BRAIN CLUB NEWS

## The Great Duck Race

**Brain Club** member Teri Bias, who with his wife Lesley and son Richard (BCMs 30) organised the Charity Duck Race for the Brain Trust, was privileged to get an 'inside report' from one of the contestants.

"I was one of approximately 1500 ducks released at a Duck Race held on the River Thames at Harleyford, Marlow, on 9th August last year. It was the first time I had raced for the Brain Trust, but knowing the half mile course well and seeing so many happy spectators on the bank side, my friends and I decided to put on a good show.

"It was a bit nippy when we were launched from boats and, as in previous years, there was lots of pushing and shoving until we found our best current.

"All along the bank Brain Club members were, for the want of a better phrase, egging us on! At the finish line we could just make out large numbers of them clustered



Prizes - all 62!

around the beautifully decorated prize stand, which was choc-full of the prizes for which we were racing. Some of the other ducks told me they had heard (from the quack troupes we sent out to investigate before agreeing to race for charity) that the prizes included a signed book from Princess Michael of Kent, a complete set of **Children's Britannica** from **Encyclopaedia Britannica**, a day out for four

at Beaulieu, a visit for three couples to Bocket Hall to view Lord Bocket's Ferrari collection, a bottle of champagne and a Russian doll from Sir Brian and Lady Mary Tovey, and lots lots more.

"At half way the race hotted up and it was apparent that I was not going to win, but I made an effort to be among the first 62 across the line to clinch a prize for my sponsor.

"With all the ducks sponsored for £1 per duck, I understand that over £1000 was raised for the charity (The Brain Trust).



Half way mark

"After one hour in the water the winning ducks were scooped out. I managed to get into 60th place and win a bottle of champagne for my sponsor, a young lad called Tom (his granddad said he'd help Tom drink the bubbly!) The prize winners were announced while members of the Ordinary Boater's Club collected the 'also rans' before they drifted towards the weir!

"Well friends and sponsors, I'm back in my bag now awaiting my next charity race. I hope everybody enjoyed



The winners with Richard Champion - Bias BCM 30

themselves and that you will come and cheer me on in the next race for *your* charity!"

The organisers would like to thank all those who generously donated prizes:-

**HRH The Princess Michael of Kent; Lady Montagu; Lord and Lady Bocket; Sir Brian and Lady Mary Tovey; Encyclopaedia Britannica; BBC Books; BACIE; Rank Xerox; Vovlo; Tektronix; Douglas Brand; Tony Buzan; Raymond Keene; The Ordinary Boater's Club; The Arizona Outlaws; Marlow Marine Services; The Compleat Angler and Da Ciro's Restaurant.**

This month we have the following major items of news.

**University 92**

A full report of the 1992 Brain Club University held in Jamaica is scheduled to appear in the next issue. Do not miss it!

**University 93**

Readers will be intrigued to learn that the 1993 Brain Club University will be held somewhere in Greece! Full details of dates, times and places will be given in the Spring **Synapsia**.

**Conference 93**

The 1993 Brain Club Conference is to be held in the historic setting of the Naval and Military Club in Piccadilly, London. Full details of the theme and format will be sent in a separate mailshot, but **please note**: the dates have been revised since the publication of the last **Synapsia**. **THE 1993 CONFERENCE WILL BE HELD ON SATURDAY, 4TH SEPTEMBER.**

**Somerset Cell 93**

We are delighted to announce that Lynn Collins has undertaken to run the Somerset Cell. Caro Ayre remains very much involved - indeed, she will continue to attend meetings that will still be held at Greenham Hall - but your first point of contact will now be Lynn Collins. Lynn will already be known to many through her regular attendance at the Somerset Cell and from last year's Conference at Durham, where she gave an excellent talk on 'Developing Family Genius in the Home.' A few words from Lynn herself:-

"Current meetings are focusing on the basics - Mind Mapping, Memory, Speed Reading, Learning How You Learn - and will branch out through the year to include other disciplines such as the Alexander Technique, Homeopathy and their relationship to whole-brain techniques. We will be inviting members to share their personal insights in talks on their own subjects. And - **important announcement** - we will be welcoming Tony Buzan to our meeting on Sunday, 18th July. Mark that date in your calendars and please come to meetings before then, too!

"We meet on the third or fourth Friday of each month -

every third month the day is changed to Sunday so that families and those living far away can attend. The Sunday meetings will also be extended to include Mind Map note-taking practice for the last hour. As an extra bonus, we will do this by watching videotapes of the 1991 Royal Institution Lectures presented by Richard Dawkins, entitled 'Growing Up in the Universe'.

"Please phone me before you attend for the first time to confirm the dates; the telephone number is (0823) 667685. Our meetings will continue to be held in the friendly surroundings provided by Caro and Peter Ayre at Greenham Hall."

**MAIN SESSIONS of the SOMERSET BRAIN CELL**

**Sunday, 28th March at 2.30 pm: Learning How You Learn - TEFCAS, Mind Mapping Review and Dawkins.**

**Friday, 30th April at 7.30 pm: Memory Systems and Advanced Mind Mapping.**

**Friday, 21st May at 7.30 pm: The Alexander Technique and Concentration.**

**Sunday, 27th June at 2.30 pm: Homeopathy and Dawkins**

**Sunday, 18th July at 2.30 pm: Tony Buzan speaking on Motivation.**

It only remains for me to offer a special welcome to all new members and to express a hope that 1993 is proving - and will continue to prove - a happy, fulfilling year for everyone.

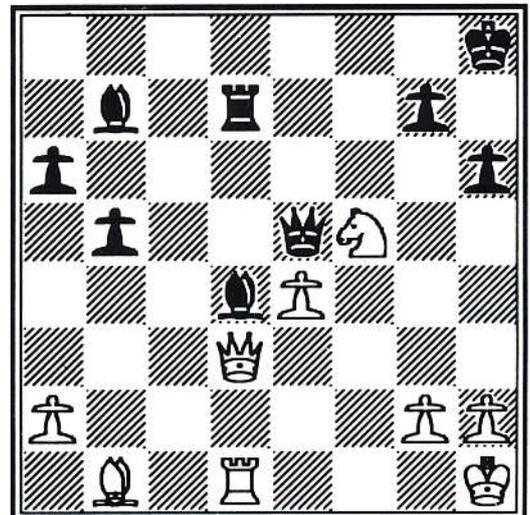
**The Brain Club is actively seeking new members. The individual fee is £30 a year, for which members receive Synapsia four times a year plus other benefits. Contact The Harleyford Manor Estate, Marlow, Bucks SL7 2DX, UK for membership details.**

**CHECK MATE**

By Raymond Keene

This position is taken from the game White: von Popiel  
Black: Marco  
Monte Carlo 1902.

White must have thought he was winning here due to the pin on the bishop. How should Black have turned the tables?



! Bg1 threatens the white queen and 2 ... Qxh2 mate.

# SING-ALONGA-ZANDER

## Scale the Heights with Ben

### Professor Ben Zander BCM 500



The charismatic conductor of the Boston Philharmonic shows us that we are all innately musical. His instruction to the Editor was to retain all exclamation marks, as they reflect the gusto of Ben's conducting. This I have done.

of speed reading), while giving a fairly hefty impulse on the first 'ROW', and another one on the beginning of 'MERRILY', and then letting it float from there, I was able to get this chorus of 'left-brainers' (including the so-called deaf ones!) to waft the phrase with delicacy and consummate artistry! You should have heard the New York group's buoyant and ecstatic rendition of the joy theme from Beethoven's **Ninth** - in German, no less!

A quick analysis of **O come all ye faithful** - the only piece everybody knew - and a brief rehearsal led to one of the most impassioned and 'idea-ed' performances ever given of this carol! All body parts were requisitioned, and a roomful of wild conductors and lusty singers raised the roof. The hotel staff were amazed to hear such a fervent rendition in mid-summer, and no one could be found to admit that they were not musical.

### DIY

Here is how it is done. You can try this at home - it's not dangerous! You might even try to influence your neighbours and friends to sing this way at Christmas!

The reason **O come all ye** usually sounds so boring is that it is sung too slowly, with an eq-u-al em-pha-sis on ev-ery beat! So pick up the tempo to essentially one beat per bar, NOT four beats per bar.

The first bar has one important



note, the **A** on 'come'. The note before leads to it: **O come**. Make a little break and then treat the next two notes ('all ye') as a fast moving up-beat leading to 'faith'. The note for 'faith' is one note on the scale above the note for 'come', so it will be a bit louder. The 'ful' of 'faithful' is a very weak and uninflected syllable.

Now make a big gap - take a breath, as long as you dare- and then really belt out the 'joy' of 'joyful and triumphant'. As long as the 'joy' syllable has a lot of energy and emphasis, you can do whatever you want with the rest of it. I like to be nice and free with it and give lots of time to 'triumphant'. Observe that the note for 'joy' is one higher than the note for 'faith', so it will be louder still.

By now you are beginning to get the range-reading shape: **A** goes to **B** goes to **C** sharp. Notice that the next note in the scale, **D**, is tucked in on the syllable for 'tri', so give it some extra time.

**A** new force has entered the Brain Club arena, namely, the force of music.

I have had the enormous privilege of participating in two workshops on the brain, one in Swansea and the other in New York. There were opportunities to try out my own special kind of musical Mind Mapping on unsuspecting and self-avowedly unmusical people, with astonishing results.

The reason, I believe, that so many people think of themselves as unmusical, or unable to respond to music, is because they regard music as a boring and mechanical phenomenon. Or rather, music has been presented to them in that way. 'ROW, ROW, ROW YOUR BOAT GENTLY DOWN THE STREAM' they sing with a heavy accent on each note, and about as merrily as a bunch of rowers in your average slave ship.

### Faster

By getting my people to sing at a much faster tempo (the musical equivalent

Because the harmony changes in the next phrase (a minor key is implied, for you musically trained), there is a more pleading quality to the second 'O come', and it will be a little softer: 'O come ye, O come ye to Beth-le-hem'. By 'Bethlehem' the sound will have diminished considerably, but now we have the highest note in the piece, the **E** that was implied by the rising scalewise motion (i.e. **A B C** sharp **D E**) for the third and biggest 'Come'.

This is just a falling scale from high **E** to low **E** with a few extra decoration notes thrown in. 'Come and behold him, born the king of angels'. Since you will have sung the high **E** as loud as you can, it will naturally diminish in sound as it falls to the low **E**, by which point you will be quite soft. Take a big pause and a breath.

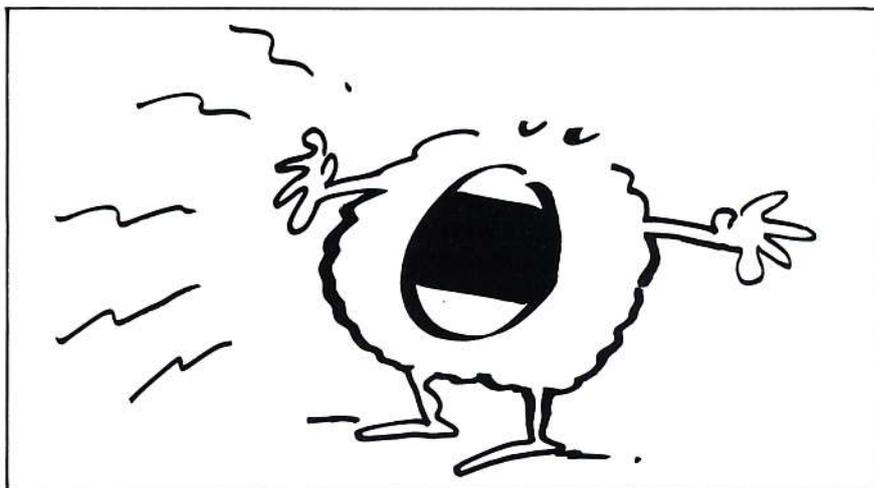
### Climb to the Climax.

Now for the final phrase. The first 'O come let us adore him' is all built around the first note **A**, i.e. like turning around it ..., so only think of the **A** as if you were whipping cream in a bowl rather than chopping meat with an axe on each note. The **A** is the centre of the cream and the whisk goes around, above and below the note, but it is *really about* the centre of the cream, the **A**! In axe-chopping there is no hierarchy - every stroke is equal, which is what makes it so unpleasant!

Go up to **C** sharp for the second 'O come let us adore him'. Because it is higher, it will be louder, so it is just as well that we came down nice and soft on that downward scale from **E** to **E**: we were all set to start the first 'O come let us adore him' softly. Use the same cream-whipping movement to get away from axe-chopping while you sing the second 'O come let us adore him'.

Remember to avoid letting it get slow. The faster you do this the smoother the cream will be, i mean the more effective it will be. And of course, it will not seem rushed because whipping cream never seems fast, just smooth, right? Even when you use an electric whisk.

Then you have one more phrase.

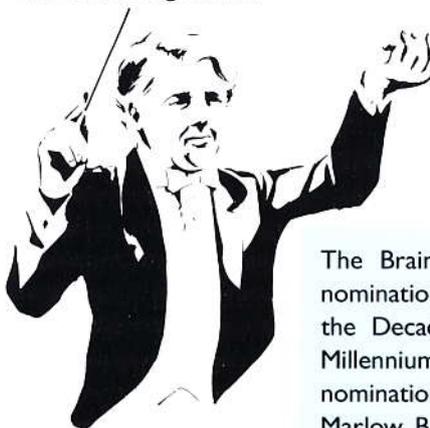


the biggest of all: 'O **COME** let us adore him, Christ the Lord'. You need to take an enormous breath (and, of course, a commensurate amount of time) before singing this last phrase, so that it will take you all the way powerfully and intensely to 'Christ the Lord', which is where you were going when you first went to 'Be-eth-le-hem'.

**That's it! This is certainly the first time in history that someone has given a lesson on musical interpretation, in print, to non-musicians.**

### Body Parts

When we did this in Swansea and New York, we found it enormously helpful to move hands and arms in time with the phrasing. There is nothing worse than a bunch of stiffs trying to conjure the Glory of the Lord. Incidentally, it goes without saying that you don't need to be a believer to sing this carol with full fervour. It's all about the glory of the immortal forces of the universe, in which everybody believes. So sing away, and don't worry about the neighbours!



The Brain Trust would like to receive readers' nominations for the 1993 Brain of the Year, Brain of the Decade, Brain of the Century, Brain of the Millennium and Brain of All Time. Please send all nominations to The Harleyford Manor Estate, Marlow, Bucks SL7 2DX.

### Personal Joy

What was the joy for me in all this? Just making impassioned music with people is always a high, but I came away from those two experiences more convinced than ever that everybody is musical! It's like Michelangelo said about his statues - they were buried in marble, and his job was to chip away until they were revealed.

We get so self-conscious and inhibited in our relationship to music, at such an early age, that we actually convince ourselves that we are not musical. There is no such thing as an unmusical human being, anymore than there is a human being who is not a potential genius! So, get cracking and see you at the next Buzan sing-in! ■

*Readers should refer to Synapsia Vol 2 Nos 3/4 where Ben Zander can be seen 'swinging' in Swansea -Ed.*



**Brenda Barrett** has responded to our suggestion that a Brain Club member might like to review **Brain Sex**. She tells us that "I solicited the help of my husband when writing this review, as I thought that with all good things it would be helpful to have a male opinion. He brought a less personal view of events, so there was some cutting done. We enjoyed comparing notes, and it was a fun exercise. Why not try it?"

## BRAIN SEX

### The Real Difference Between Men and Women

Anne Moir and David Jessel  
Hardback 228 pp \$29.95  
Michael Joseph Ltd  
27 Wright's Lane  
London W8 5TZ

The authors have tackled the seemingly insuperable task of explaining the differences between the way men and women think. There are many surprises and interesting facts. This is not a trivial book (there are 23 pages of scientific references for the dedicated individual to research, if so inclined), but it is the interpretation of current research that makes fascinating reading. The title, I feel, is most unfortunate - the response it gets from most people is a raised eyebrow and a wry smile!

The authors have been able to explain, in layman's terms, many mysteries by giving answers to "Why can't a woman be more like a man?", an often-heard lament.

It was refreshing to get away from the one-sided feminist and chauvinistic views that are so often expressed. Clear descriptions are given of the many differences that have been ob-

served and researched, and of the manner in which hormones have such a profound and permanent effect on all of us. Different female/male characteristics are explored in the areas of personal relationships, feelings and caring, spatial awareness, mathematical abilities, and in the criteria for happiness and success as well as sexuality.

The differences are presented not as a score to determine which sex is 'best', but as qualities and characteristics, assessed on a statistical basis, which should be recognised and built on. Surely it makes sense to utilise the best of our individual and distinctive characteristics for the most appropriate tasks, rather than feel we must be better than or the same as one another.

I enjoyed immensely words of wisdom like, and I quote: "Men and women could live more happily, understand and love each other better, organise the world to better effect if we acknowledged our differences."

I highly recommend this book.

**Brenda Barrett BCFM 485**

## BOOKS Your Top Ten

We would like you to send us a list of the ten books that you recommend to Brain Club members (including yourself) as a means of enhancing *mens sana in corpore sano* - the development of healthy mind, healthy body. In other words, ten books that have influenced you, books that excite you, books you might even 'rave' about, and that you would personally buy for your family and friends in order to help them develop as a well-rounded personality.

Your lists of favourite music and poetry are also requested.

Geoff Buckley, BCM 85, writes from Australia "I have given much thought to my top ten books ....These are the books that have been most significant for me, and that I would love my children to have read."

# THE IONIAN REVIEW COLUMN

## 1 OPERATING MANUAL FOR SPACESHIP EARTH

R Buckminster-Fuller

A simple introduction to Buckminster's work and philosophy highlighting how interconnected we are with the whole planet.

## 2 HOW I FOUND FREEDOM IN AN UNFREE WORLD

H Browne

A marvellous book that opened my eyes to so many fundamental truths about how to live.

## 3 UNLIMITED POWER

Anthony Robbins

About how to control one's mind and thoughts, and how to unleash the amazing potential everyone of us has.

## 4 FIT FOR LIFE

H & M Diamond

The best book I have ever read on how to have a healthy, fit body.

## 5 MAN'S SEARCH FOR MEANING

Viktor Frankl

We all need a sense of purpose in our lives. This little book deals with the importance of that purpose.

## 6 THE ALEXANDRIA QUARTET

Lawrence Durrell

These stories rank as the best of all the fiction I have read, providing an insight into how differently four people view the same events.

## 7 THE E-MYTH

M E Gerber

As a businessman I have read hundreds of books about business. This one captures simply what is required to run a successful business.

## 8 THE MAGICAL CHILD

J C Pearce

How to bring up a child. How to foster the potential for genius in all children.

## 9 THE THIRD WAVE

Alvin Toffler

Toffler explains the economic/social times of accelerating change in which we live.

## 10 THE FOUNTAINHEAD

Ayn Rand

A novel with an important message, and an introduction to the marvellous works of Ayn Rand.

# AMAZING MEMORY STORIES

Dream On

Tony Buzan BCM I

**T**he great organic chemist Kekulé sat by the fireside in his lodgings in Ghent, watching the flames and drifting into a dream state. He had been working for years on the structure of the benzene ring, a mystery that had eluded all the great scientists of the Royal Park, and the solution of which they were all chasing to see who would be first. In his dream the flames became leaping snakes, writhing upwards in giant spirals.

Kekulé leapt into consciousness, realising that his dream had given him the answer. As he said, "... and lo, the atoms were gambolling before my eye...."

The structure of the benzene ring was a spiral! He went back to the laboratory, experimented, found his dream-solution to be correct, and will remain in history as the man who discovered that particular structure.

In 1890, 25 years after the publication of his now famous proposal for the structure of benzene, Kekulé said: "Let us learn to dream, gentlemen, then perhaps we find a truth."

In the middle of 'dark and stormy nights' in America, Edgar Allan Poe would awake from his nightmarish dreams screaming and bathed in sweat. Rather, however, than cursing the nightmare, he would, with a certain ironic pleasure, take pen and paper and note the content of that greatest master of horror story writing, the human brain.

The memories of his nightmares became some of the great creative literary masterpieces of the century.

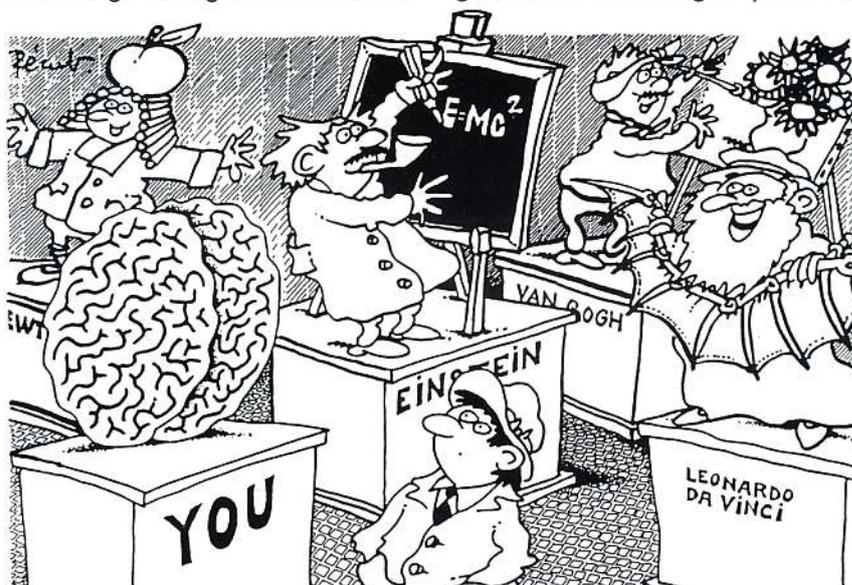
Across the planet, in Spain, an artist would wake from a night of the most incredible and vivid dreaming.

Remembering great dreams that made them great.

Salvador Dali would rise from his bed, hold the memory of his dream perfectly, and then translate that dream, again perfectly, to canvas. He would later explain that many of his greatest paintings were simply the result of his hand, the servant of his brain, obediently and accurately transcribing the image of the dream he

continually come back roughly to where you started, then forever must be what? Obviously curved in some way and therefore encased. Which is exactly what Einstein said: "We live in a curved and finite Universe."

In order to encourage his post-doctoral physics students to become great scientists, he regularly exhorted



was immaculately memorising.

Einstein, after years of studying and developing his skill to night-and daydream, would go on public record saying, "Imagination is more important than knowledge, for knowledge is limited, whereas the human imagination is infinite."

In fact, Einstein made his great discoveries about the Universe while practising 'programmed dreaming'. He imagined what it would be like to go for a ride on a sunbeam to the very end of the Universe. Every time he got to the 'end', he found himself relatively near the point where he had begun. If you go forever in all directions, and

them to play dreaming, imagination games in order to develop their mental muscle.

Throughout the centuries, great musicians report waking with their next masterwork ringing in their ears.

Your dreams are, on one level, the great creative engine room of your brain. Capturing these masterworks with your memory will encourage the growth of these enormous potentials and skills. ■

## QUOTE OF THE QUARTER

Dare to dream  
Lana Israel BCM 222

# ON HOW TO CLIMB A LADDER

The Glowing Red Book

Lana Israel BCM 222

**Lana attributes her success in life to taking a risk.\* She has included the promised Mind Map illustrating her future, which looks very bright!**

**T**here are complete schools of thought devoted to it. Best sellers, magazines and audio tapes about this topic surface from airport book stores and city libraries. It is the ability to take a risk in life.

Yesterday, I heard the words of Dr Leo Buscaglia over my TEAC stereo hi-fi system: "Being afraid to risk keeps us lonely!" Rabbi Kushner, in his comprehensive guide for finding meaning in life, urges the importance of preparedness to take chances. These messages were all too familiar to me. For I too, at a young age, learned the power of taking a chance, of daring to risk. In the winter of 1988, as a thirteen year old, I took the most important risk of my life. I read a book.

"Lana, I'm leaving this book on the kitchen table for you to read. It's interesting. You might get some good ideas from it." Those were the words of dad. The book sat on the kitchen table for weeks, as the thought of reading it was as foreign to me as snorkelling in the Great Barrier Reef. Eventually my defence mechanisms weakened. I believe I was made literally sick by eating every meal with that glowing red cover so innocently lying there. So innocently reminding me that I was lazy. I read it.

Next summer I was snorkelling in the Great Barrier Reef. I had lectured at the Eighth World Conference on Gifted and Talented Children in Sydney, Australia. The only child lecturer, I received tremendous attention and I wasn't complaining. At the completion of my lecture I had intended to distribute copies of the short book I had written and printed. The feeble audience I had expected numbered "250 people, SRO.", as eloquently stated by the Associated Press. The media was at arm's length continuously. We befriended each other instantly and my book was published. Along with me, for the tedious journey and for validation, was the glowing red book **Use Both Sides of Your Brain**, by British psychologist Tony Buzan.

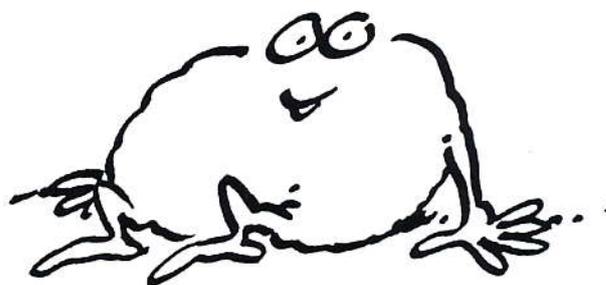
"What was it like to teach teachers?" asked Leah Eskin of **17 Magazine**<sup>1</sup> "Lana, what is your advice to other young entrepreneurs?" asked Joan Lunden of **Good Morning America**<sup>2</sup> "Do you know what the secret to success is?" asked John Scully of Apple Computers<sup>3</sup> (Answers on page 19).

*\*Readers should refer to Dr Gardner's assessment of the benefits that accrue from keeping a process folio. -Ed.*

*1 A bit strange , but a lot of fun. I made the rules and they listened. 2 Dare to dream. 3 Networking.*



I couldn't contain my excitement! With each day, each phone call, each fax, each letter came requests for interviews or invitations. I would return home from school and

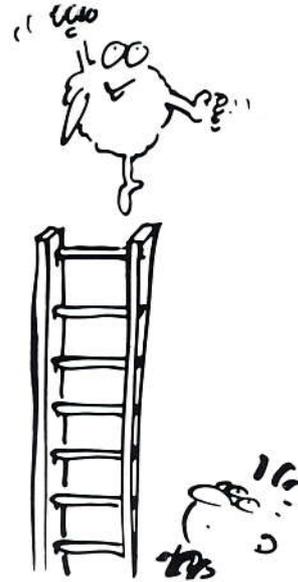


run to the garage (which transcended oil and grease and now serves as an electronic cottage, my dad's office), to hear the news.

The red book had become the basis of my eighth grade

science project. The project led me Down Under to the conference, as my elementary Gifted teacher, upon seeing it, suggested that I apply. The conference led to the publication of my book, written with the sole intent of providing the audience with a tangible reference. The book led to the start of my business, *Brain Power for kids Inc.* My business led me to a continued interest in the brain, functioning by links, connections and associations. Links, connections and associations led to the success of my business.

Reciprocity. Locke fashioned a social contract upon that system. We fashioned democracy upon that system. I fashioned a business upon that system. As I continue to climb each rung of the ladder of business, I learn, and remember that sometimes I need to climb with one hand behind my back, blindfolded or backwards. For with each risk comes the materialisation of human potential. ■



**The Global Brain**  
Atlas Revisited

So there are BRAINS out there  
That thrill to FACTS:  
The specific 'this's' and 'that's' and 'the others'...  
That resonate to sequences:  
Step One, Step Two, Step Three, (Step lively, there!)  
Or (Step carefully, but step in order).

And there are BRAINS out there  
In every country, every clime,  
That put the world together like a puzzle,  
Perhaps a piece at a time  
But cognizant of an eventual picture... a FORM  
With parts and areas and boundaries.  
"Find the edges first, and then the colours.  
Then the design emerges and everything fits."  
Now don't jiggle the table  
When the puzzle is solved.  
Keep it intact. Keep it together.  
Draw the chart.  
Save the system.

And, of course, there are BRAINS out there  
In north and south and east and west  
That beat like living hearts  
Brimming with FEELING!  
"My brothers." "My home."  
"My sisters." "My town."  
"My friends." "My dominion."

This poem was inspired by some interacting with Ned Herrmann at Master Class in July 1990, Lake Lure, NC. He believes that "...the world is a composite whole brain."

"My country."  
"My world."  
"My universe."  
Connected, concerned, convivial, collaborative,  
Conversant, co-ordinate, co-existent.  
We like. We live. We labour, We love.

And, last but not least, there are the BRAINS out there  
In every country on every continent,  
On land or sea but always in the air,  
Seeking the stratosphere,  
Peering ahead,  
Parting the curtains, rending the FUTURE'S veil,  
Dashing along, stumbling on rocky paths,  
Falling,  
Skinning their mental knees  
But getting themselves up by themselves,  
Dusting off, saying a "Damn!" or two.  
Fumbling, FANTASIZING,  
Then sprinting to catch the comet,  
Seeking to salt it's fiery tail.

Well I have travelled widely over this globe,  
And I have met the FACTS people, the FORMS, the  
FEELINGS, the FANTASIZING FUTURISTS.

And I believe Ned was right!

Anne Durrum Robinson BCM 476



When no means yes

Dear Editor

Early in his interview with *Synapsia*, Kenneth Blanchard says he is convinced that my father, B F Skinner, was a genius. So far, so good. He next claims that he popularises Skinnerian theory in his *One Minute Manager*. Nothing wrong with popularising Skinnerian theory - if, that is, you understand it in the first place. Blanchard, unfortunately, has got some of the basics back-to-front.

Reinforcement of any description reinforces behaviour. So negative reinforcement does not, as his list of "...the three major consequences of behaviour" states, decrease the frequency of future behaviours, it increases it.

Negative reinforcement is the removal of undesirable stimuli (mild shocks to experimental rats, for exam-

ple). The behaviour (pushing a lever, eg) is still being reinforced because the consequence is an improved situation (no shocks).

That which decreases the likelihood of repeat behaviours - punishment being a good example - is, in Skinnerian verbiage, called an 'aversive stimulus'.

Deborah Skinner  
Garden Flat  
17 Lambolle Road  
London NW3 4HS

Yes please

Dear Editor

I am writing to offer my services as a contributor to *Synapsia*. I am a PhD student at the University of Calgary Philosophy Department, with a special interest in the philosophy of mind. My particular field is the problem of con-

sciousness - what it is, what it is for, where it comes from, and how it can be the manifestation of a purely physical system.

I am fully aware that articles for *Synapsia* must be accessible to the intelligent lay reader, and cannot be too technical, dry or abstruse.

Please let me know what you think.

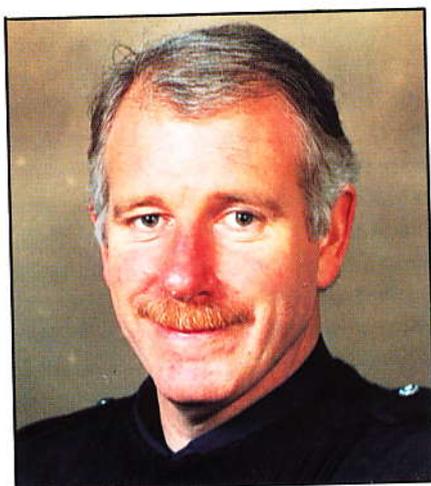
Andrew Bailey  
Philosophy Department  
University of Calgary  
2500 University Drive NW  
Calgary  
Alberta  
Canada

Mr Bailey has listed a number of fascinating topics that he would like to write for us. Of especial interest is *The Systems Metaphor*, since we have just featured two of Howard Gardner's articles, and of course *Behaviourism* (see Deborah Skinner's letter). - Ed.

All future correspondence should be addressed to the incoming Editor, Byron Jacobs, at 23 Ditchling Rise, Brighton. East Sussex, BN1 4QL, UK. - Ed.

# THE MET LEARNS MIND MAPPING

This is an interview for *Synapsia* by Gisela Hagemann, BCM 701, with Superintendent Douglas Brand, BCM 314.



**S** The Metropolitan Police is highly respected internationally. People living abroad know it perhaps most from detective films, and children visiting London return with a dream of becoming a bobby. Imagining a crowd of policemen playing with coloured pencils and drawing little images is not what we would normally associate with the Metropolitan Police. So what can the police use Mind Mapping for?

**DB** Mind Mapping is a mind-expanding technique that we hope will encourage individuals within the organisation to develop their local quality service initiatives, give them more self-esteem and increase their efficiency.

One of the most exciting developments of Mind Mapping is its use in crime investigation. Imagine the situation where a distraught victim of a sexual crime rings a police station. The police officer eventually needs a chronology of events to investigate and prosecute a case. The victim is unlikely, however, to give the information in the order the police officer would want it. Conventional notetaking over the telephone could intimidate the victim, and cause him or her to ring off, or it could frustrate the officer and cause him to miss vital informa-

"Brain Power for Quality Service" was the motto of a one-day seminar with Tony Buzan, 400 Police Officers and civil support staff of the Metropolitan Police in London. The event was the fruition of six years of gentle prodding and persuading by Superintendent Douglas Brand of the Metropolitan Police Public Order Training Centre, which he heads. He wants to demonstrate the forward thinking of the police in areas of quality service in the public sector.

tion. By using Mind Mapping his gathering of information can be achieved by just noting the disjointed facts being presented by the victim. The Mind Map allows him to go back to any issue not properly covered, i.e. a description of the clothing of an attacker, property missing, the current welfare of the victim, etc.

If an offender is subsequently arrested the police officer can prepare his plan of interview with a Mind Map. He can make further notes of responses during his interview and, finally, the direction of his investigation and its priorities can be complemented with a Mind Map.

I have used Mind Mapping to design a completely new set of training courses for senior police officers learning command skills to deal with public order events, even of the magnitude of the Poll Tax disorders in Trafalgar Square in 1990.

**S** You yourself are six feet nine inches tall. Looking at police officers, one could get the impression that they are recruited according to height. I would assume they feel and act quite powerfully. Why do you think it is necessary to develop their human potential and self-esteem, and what can Tony Buzan's methods contribute in this respect?

**DB** Becoming aware of the unlimited resources of your brain and applying brain principles like TEFCAS (try - event - feedback - check - adjust - success) gives people confidence and releases their creativ-



ity even in a working environment, where they might have thought that creativity was unnecessary, perhaps even unwarranted.

Mind Mapping is not intimidating. It authorises the most creative of thoughts. The police officer is not only a representative of authority but also an individual. Confidence contributes to self-esteem. Understanding how your brain functions can help a police officer in the most extreme circumstances. For example, in a serious public disorder situation a confident and self-aware police officer is more likely to understand that the aggression being offered is not aimed at him as an individual, but rather at what he represents, i.e. an organ of authority. This confidence and self-esteem can be developed by using brain principles, and Mind Mapping is a useful practical tool in this process.

**S** How do you want to improve the quality of service of the police, and why is it important?

**DB** I want to help destroy the myth

about the police being a backward-looking organisation. The police are in the vanguard of ideas for more efficient, effective and economic methods of giving service, and we should always have to the forefront of our minds the needs of our customers - the public.

We want to empower our workforce and give it responsibility within wider parameters. So, for instance, it would be of limited value for the centre at Scotland Yard to dictate policy so specifically to local units that it stifled their initiative. By legitimising local initiatives the quality of service, rather than being shackled by central dictate, can be free to develop for the benefit of its local customers. For example, a catering unit of the police, which deals almost exclusively with a training centre where the main activity is physically orientated, might determine to improve the food it offers to include more carbohydrate for more energy. This might be contrary to a central policy, but nevertheless be applicable and appropriate at the local level.

Initiatives have always been taken at a local level, and I can recall that at a previous police station of mine there was a big gay community. In order to overcome some of the misconceptions and fears we would invite members of the gay community to talk to police officers, to help communication and break down some of the barriers. To reciprocate, the police offered to speak to the gay community to eradicate some of its fears. These initiatives might have appeared to be risky in the past, but we now have a very open and mature outlook. So, therefore, this seminar is just the next step along the road of our development as an organisation that delivers quality service.

**S One percent of the organisation attended the seminar. How did people respond to the message?**

**DB** The reaction of the audience was very enthusiastic. Some of the comments included:-

"The best day's training I've ever had."

"I've been using Tony Buzan's book

for many years, but to get together with so many people and realise I am not alone was very gratifying."

"This has come at the right time. I have a difficult project to do and I can now see a way forward with Mind Mapping"

"I have prepared my briefings for the Carnival at Notting Hill by using Mind Mapping. It enables me to make the briefings more interesting by focusing on relevant issues more easily. I can make better associations with the main subjects of the Carnival Strategy and the partnership approach (that is between the police and the Carnival organisers, the local authority, transport authorities, and local residents), as well as issues to do with public safety."

With comments like these I am satisfied that it's a good first step. Personally, it has given me a great deal of encouragement and confidence for the next steps in developing the local quality service initiatives.

# THE SCHOOL AND WORKPLACE OF THE FUTURE

Howard's Way  
Dr Howard Gardner



**C**ontextualisation is the idea that intelligence is never completely in the head. And so, in principle, you can't tell how smart somebody is by sticking electrodes in his or her head. You have to look at people situ-

This article is the conclusion of Howard Gardner's lead dissertation in the *Autumn Synapsia*.<sup>\*</sup> Readers will recall that Dr Gardner, a distinguished Harvard University education professor and pioneering psychologist, stated that we all have blends of seven 'intelligences' (linguistic, logical mathematical, musical, spatial, bodily kinesthetic, interpersonal and intrapersonal), and that there are many more. This is the concept of pluralisation, discussed at length in the first essay. Dr Gardner here elaborates upon the newer ideas of contextualisation and distribution. Now read on!

ated in the context of all the opportunities that exist in their society, and by implication, not with reference to those things which don't exist in their culture.

For instance, if print hasn't been invented in your culture, the fact that you might, in principle, be good in learning how to deal with print is irrel-

evant. Similarly, if chess hasn't been invented, the fact that there might be a good chess player out there is irrelevant. Unless you can mobilise those abilities for something that does exist in your culture, they won't count. So, in

<sup>\*</sup> This essay is based on a lecture given by Howard Gardner to the Young Presidents' Organisation. It has been edited only in the interests of clarity.

making the shift from perceiving intelligence as solely in the head (or even in a test that we might take), to seeing intelligence as being a symbiotic relationship between what's in the head and what's in the culture, we could say we'd have made a Copernican switch. We'd have switched the whole nature of the insight.

### Project Spectrum

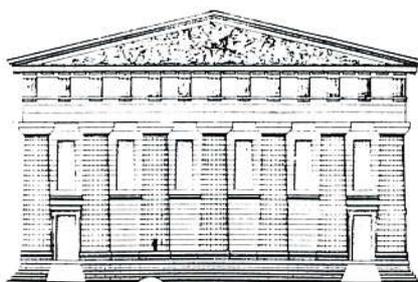
When I first proposed my theory, I received letters and phone calls from all the leading testing agencies in America saying "Great! Seven intelligences, seven tests! Let's do it!" I replied that they hadn't a clue as to what I was talking about, because the very notion that, say, bodily kinesthetic intelligence could be assessed with a pencil- and- paper test is silly. If you want to know if people have got these intelligences you've got to watch them in the world. You have to create a context in which you can look at the intelligence of individuals. So, enter Project Spectrum.

Spectrum is a project that we've been doing for over seven years in Boston with kids ranging in age from four to seven. The idea is to find out how smart they are, but it's a very different way of thinking about smartness. We've created an environment that in many ways resembles what a good classroom environment should be, but it would be helpful for you to think about it as being a cross between a familiar classroom and a childrens' museum.

These museums (exploratoriums or discover museums) are places offering hands-on exploration. That's what the Spectrum classroom is like. It's a very rich environment where kids have opportunities during the course of the year to play with all kinds of things that allow us to assess their profiles of intelligence. And not on a one-time basis - you can't tell how smart somebody is when you ask them something once, because all you're finding out is how much previous experience they've had. That's why the IQ and Scholastic Aptitude Tests are anomalous. They claim to be testing what you know *now*, but they're really testing what you've learned *until now*.

### Watch and Tell

The only way to tell if somebody can learn something is to watch him or her over a significant period of time. So in our Spectrum classroom, as in the workplace, we create a rich environment giving people lots of opportunities to play and work, and we see who gets better and who doesn't. I'll describe some of the stuff in a Spectrum classroom, and you can relate these items to my intelligences, but there are more opportunities than there are intelligences because we don't let the series drive our methodology.



#### A The Bells

There are plenty of opportunities for the expression of musical intelligence. We use Montessori bells, as we're very happy to 'steal' good material invented by other people. This item lets us spot musical intelligence in children by seeing if they can pick out melodies or notes, or create new melodies, or imitate those that we teach them. We keep other instruments around for the kids to play with and, again, to do their own musical exploration.

#### B Assembly Tasks

This is one of two unexpectedly revealing items (see **G** for the other one). We ask kids to take apart or put together common objects, like a door knob or a meat grinder. What we find is often most helpful for kids who are considered to be complete nullities in school.

We had a kid who I will call Donald. He was in the 1st Grade at school in Somerville, and after a few weeks the teacher had decided that he was a failure and would have to repeat the class.

We took these assembly tasks to Donald, and he did better than any kid we've ever had. We videotaped this

performance and showed it to his teacher. She was absolutely dumbfounded, and told me later that she couldn't sleep for two nights afterwards, because she'd written off the kid as a failure in that he was having difficulty learning the alphabet. The nice thing about this story is that she was able to use some of his other strengths as a means for him to enter the regular curriculum, and he was able to do much better than before.



A newfound talent is therefore going to be an ally in school, even though it would be too optimistic to say that we could change the entire curriculum on the basis of that finding.

#### C Flora and Fauna

We have a naturalist corner, where we bring all sorts of preparations into class. The kids look at them with the naked eye or with magnifications, and we talk about them, compare them to other things and classify them. We see which kids would be good naturalists (that's the word we use), namely, those who can really observe and notice carefully.

#### D Numbers without Tears

There are lots of numerical games. Kids who do well at the Dinosaur Game get to play the Bus Game, which is harder. Remember, these kids are five-year-olds!

In the Bus Game, the kid's the driver and you're the boss. The kid has to go from one corner to the other, and every time the kid goes to a corner some people get on the bus, and others get off. Every once in a while the boss, who would be the teacher or experimenter, asks the kid how many people are on the bus.

This is a hard problem for a five-year-old, because children of that age don't yet know how to create tally systems. But some are on the verge of

being able to record things, and kids enjoy the games whether or not they're winners. The games also give us some idea of the players' logical mathematical intelligence.

### E Imagine That

Then there is the story board. With this we get to look at the kid's linguistic ability and imagination. We found that some kids like to make their own story boards, so we get to see their constructive abilities as well.

### F The Arts

We do a lot of work in the visual arts and what we call bodily kinesthetics - you would probably call it gym or dance!

### G The Class in Miniature

This is the other very revealing task. We introduce it about halfway through the year, when the kids are asked to reconstruct the big class in terms of a miniature version. Some can do this almost perfectly, but others can't even distinguish the longer part of the class from the narrower part - that's a spatial test.

We paste photographs of the kids and the teacher on little pieces of wood, and this serves as a wonderfully unobtrusive measure of the child's personal intelligence. We tell them to find themselves and the other kids; we ask them what they did that day and to describe what so-and-so did, and who is friendly with whom. The kids are asked all sorts of questions about the human world, and they answer using these photos of the class. This device provides some sense of their interpersonal and intrapersonal intelligences.

### The Spectrum Report

At the end of the year we write a simple report, in plain English, in which we describe the child's profile of abilities, and areas of strength and weakness. We've never found a kid who doesn't have some strengths and some weaknesses. The world's fairly bumpy, and so are the kids' own intelligences.

We suggest what might be done for the child inexpensively at home, in school or in the community at that historical moment, given his or her profile of intelligence. I think this is very important. Psychologists spend too

much time ranking people, and not enough time helping them.

Whenever we do an assessment of a child we try to be good scientists. We always make suggestions, because who wants merely to know what percentile he or she is in? What you really want to know is how to help yourself at that point, so that's what we try to do.

That's contextualisation!

**Distribution** is related to contextualisation, but it's not the same. Distribution means that your intelligence is not just in your head, it's in the human and non-human resources that you are able to use and exploit. So it's in the hardware, the software, the files, books, the other people in your office, the people you can fax, telephone or mail. It's in all the other human, unhuman, non-human things that exist in the world which you can make use of: they are all part of your intelligence. Once you think about it, it's obvious.



If I left you alone in a room naked, without anything else, you'd be stupid very fast because we all rely on information outside the head - you know it's in a file or a computer or your secretary knows it, or you'll remember it as soon as you return home. It takes another Copernican revolution in perception to realise that intelligence is not only an interaction between your potential and what your culture offers, it is also your ability to use the stuff that's distributed around you.

Once you think about intelligence in that way, it's ridiculous that many examiners wouldn't let you use books or calculators, for instance, because in the

real world you *do* use them: nobody ties your hands behind your back, blindfolds you and then asks you to think about things. You use everything you can. So that's the notion of intelligence as being distributive.

### Process Folio

How do we use this concept in our own work? Here is one example.

In working with kids, particularly those at middle and high school level, we have them create what we call a process folio\*. This is a record of work being done on a project. It consists of your initial ideas, the first steps that you draft, self-criticism, criticism by others early on, things that you collect from the outside world regarded as relevant, the final product (because projects have to end), plus your evaluation of that product and where you think it should go next.

Process folios are living records of the thinking that you apply to projects that you're involved in. Sometimes projects are assigned to you, even if you're a president, sometimes you create them yourself - most of the time it's an amalgam.

Projects are so important in life, but invisible in school. You take hundreds of tests in schools, yet once you leave school you take hardly any tests - you're doing projects all the time.

The process folio is a way of distributing your knowledge, of keeping a record of how your mind can evolve. If you live in a culture where you just imitate what others do, you don't need a process folio. But I maintain that people who do anything original have got to keep a record of what they're doing, have got to keep track of where they are and where they're going. The process folio is, I think, a very human invention!

### Benefits

The advantages of the process folio are that it encourages mental reflection on your direction and growth, lets you value process, and encourages risk-taking because the focus isn't just in the product. It encourages active rather than passive learning, and builds

\* A portfolio is your finished work, the stuff you use if you want to go to art school, or something like that.

awareness of the developmental histories of your work.

The basic point is that in real life, when you work on something in which you have a stake, you often reflect on your work, trying to think about where you've been and where you're going, and collect everything that's relevant. Shouldn't that be what we're doing in schools, rather than throwing away the detailed records of our work?

In classrooms where process folios have been successful, we find the entire culture of the class changing. Namely, the thinking that went into the folio, instead of the product, now becomes foreground because *you really begin to think about your own thinking*. And to me that's the essence of what education should be.

## The School

I think our view of intelligence will become increasingly individuated in the future. We'll think about every person's spread of intelligences according to his or her own agenda, instead of trying to compare people all the time. And I think we'll try to educate the person's intelligence, meaning that we won't simply accept this is how Johnny is at three, so this is how he'll be forever. Rather, we can scaffold, distribute, add, contextualise, process folio - you can invent the buzz words. That's intelligence today to as high a form as we can get.

In the School of the Future, I posit three roles for educators.

### 1 Assessment specialist

His or her job will be to figure out the intelligence or intelligences of the kids in the school *at that time*. That'll be hard to do, because intelligence in people is changing all the time: it doesn't congeal.

### 2 Student curriculum broker

The information gained will be given to the student curriculum broker, who will try to make sure that kids are taught in the best way possible. I think kids ought to have electives. I also think that they ought to have assigned subjects. There is no reason in the world why everybody has to learn assigned subjects in the same way, because once you know about the series

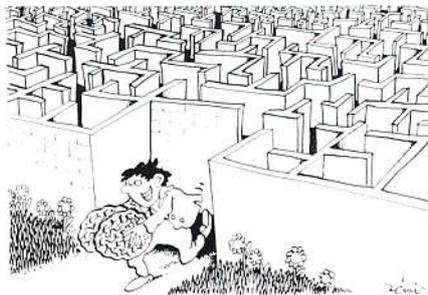
of intelligences, there should be several ways into almost every subject.

The job of the student curriculum broker will be to figure out which hardware, which software, which teachers and which kind of learning environment is best for a particular kid.

### 3 School community broker

Some kids are never going to be stars in school, but they might well be stars out of school. Why wait until your offspring is out of college for that realisation? Why not bring the school and the community closer together from an earlier age?\*

Kids who have school smarts are fortunate, as it makes the early part of life easy and gives the individuals concerned self-concepts that are comfortable. But if some children have sets of intelligences that the school doesn't particularly cater for, shouldn't those kids have an apprenticeship (or a mothership, or a big brother or sister) where they can work on their weaker areas? That will be the job of the school community broker.



## The Workplace

I started with the old view of intelligence as one 'thing' that you can measure with an IQ test. That view is not right, and it's being increasingly discredited.

Most people believe now that there's more than one kind of intelligence, and they often speak about *school* and *practical* intelligence. I would now like to give you three thoughts about how the idea of many intelligences might relate to the workplace.

### A When you think about the abili-

\* It would be interesting to compare this idea with the thinking that led to the creation of the 'village colleges' in Cambridgeshire, as these schools have made it a policy to involve local adult communities more closely with their work. -Ed.

ties and skills that you need in the workplace, and about the needs of the people who work with you, then you should try to think in terms of the *variety* of abilities and skills that you or they might call on. Don't commit the IQ fallacy. Don't assume that there's one kind of intelligence picked out by the various SATs or by grades in business school, because you'll be beaten by somebody who realises that there are lots of different kinds of intelligence.

Also, don't be narcissistic: don't look in your employees for exactly what you are, or commit the opposite mistake of looking in them for what you're not.

**B** Vary your team. Put together teams in which there are complementary sets of intelligences, and shift them around if they're not successful. Try to find optimal combinations, and be aware of the Peter Principle. If some people show wonderful sets of intelligences in one job, with one group, they might be disasters elsewhere. It's not their fault!

**C** Even so, don't assume that intelligence is immutable. All the evidence shows that anybody can change his or her profile of intelligence to some extent. The word we use now is scaffolding. You can externalise things people have in their heads, and by giving them the right kind of support (through hardware, software or whatever) you can take somebody who is moderate in a certain area and make him or her quite good.

For example, I'm not very spatial, and when I was at school I was frustrated by studies where you had to create a visual image and then reverse it in your head. But now, with some inexpensive software, I can create an image on the screen and make it any way I want. That makes me just as smart as people who can do it in their heads.

The same applies to somebody who is tone-deaf, and can't hear a melody in a fugue. Now there's machinery available that allows you to trace that melody, which makes the tone-deaf individual as smart as the person born with perfect pitch.

### Summary

The important thing is to pluralise intelligence. Then we can appreciate the value of the more recent concept of *contextualisation*, realising that intelligence is always a product of who you are and where you happen to live. Finally, we should understand that intelligence is *distributive*: it's not just you naked in your room, it's you with all the human and non-human resources that you can exploit.

Such a perspective is freeing, both at home and at the workplace: one's limits are set not by what one can't do, but rather by the positive actions that one can accomplish, in conjunction with the resources that are available in your world. ■

In the previous issue, a technical hitch caused the appearance of two incomplete sentences in Dr Gardner's lead article **From Intelligence to Intellegences and Beyond**. They are reproduced here in full, with the missing parts printed in bold type.

At the foot of page 6, col 1, the sentence should have read: "I want first to focus on pluralisation, which gives me an opportunity to discuss the work I've done in developing my theory of multiple **intelligences**."

At the foot of page 8, col 3, spanning to page 16, the sentence should have read: "But if you live in a culture where you're going to make you're own decisions about what occupation to pursue, **and if like many of us you switch occupations or avocations and do something new, and you don't have a good understanding of yourself, you're going to make serious errors.**"

I hope that readers were not too inconvenienced by these omissions. -Ed.

## Not just anyone can join



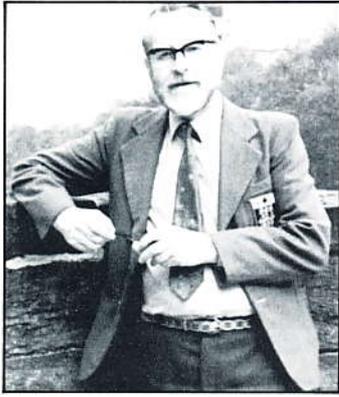
## *Everyone can*



is for anyone who has a brain and wants to learn to use it well.

For information write to:

**The Brain Club**  
The Harleyford Manor Estate, Marlow, Bucks SL7 2DX, UK



# START GO

Good Strategy as a Rule

Brian Timmins BCM 412

**This is the conclusion of the article on Go that appeared in the last issue. Could this profound oriental mind sport be the game for you?**

**Paradoxically, most** of the rules are very simple, some requiring only a glance, but it may be a good idea to go through the mechanics of the diagrams using a piece of squared paper and coins or buttons.

## THE RULES

**1** The board starts empty (except in a handicap game). Black plays first, and black and white stones are placed alternately on intersections of a 19x19 grid.

**2** No stone is moved except to be taken off if it is captured

**3** A straight line of stones cannot be cut. A diagonal line can. (For an example of lines cutting each other see diagram 1 position A.)

**4** To capture a stone or group of stones, they must be totally surrounded. (See diagram 1 B for three examples.)

**5** The game ends when both players pass consecutively, which happens when they judge that there is no prospect of making further territory or captures.

**6** The winner has the most territory (i.e. surrounds most vacant points) after deduction of prisoners.

**7** A single stone may not be recaptured if that would recreate a total board situation existing during the player's previous move. (See below for examples and explanation.)

**8** A stone may not be played at a point where it would be totally surrounded by enemy stones, unless it simultaneously captures, creating liberties. (A liberty may be thought of as a line leading from a stone to a vacant intersection. Thus, in diagram 1, the single stones at C, D and E have respectively 4, 3 and 2 liberties.)

**9** In a handicap game, Black is allowed to place up to nine stones on the spotted intersections, and then White plays first. (In an even game, to compensate White for his opponent having the first move he usually receives six prisoners before play commences.)

Rule 7 needs further explanation. In diagram 1 position F, White can capture the stone at Y by playing at X, but then Black could recapture the white stone now at X by playing at Y, and each player could continue this indefinitely. Would

they? Yes, if this isolated pattern formed part of a vital line of defence through which one player wished to break. Here is an apparent stalemate, known to players by its Japanese name of ko, which means 'eternity'.

To respect the rule about recurring patterns, a player who wishes to retake the ko must first play elsewhere, to alter the total board pattern. If the ko is very important, his opponent may ignore his play, and fill in the ko point, making his defences solid. Consequently, in playing elsewhere, one must choose a move so threatening that the opponent dare not ignore it. When he answers, since the total pattern is now different, one can retake the ko. Now it is the opponent's turn to find a move too big to ignore.... Thus a potential stalemate is often transformed into one of the most exciting struggles in a game, with threat and counter-threat of diminishing worth until one player dares ignore a threat, and simply fills the ko.

Rule 8, often known as the Suicide Rule, needs further consideration. Diagram 2 position A shows a black group surrounding the smallest possible territory. It still has one liberty, the internal point at X, and White is allowed to play there, although his stone has no liberties and appears to commit suicide, since he simultaneously creates liberties for himself by capturing, and the three black stones are removed as prisoners.

The black group in diagram 2B is likewise dead. White can throw in a stone at X. If Black captures at Y, his group will have only one remaining liberty, at X, where White can play to capture. If Black does not play, then White can still capture by adding a stone at Y.

In fact, to the experienced player, the group is self-evidently dead, and White would not waste a move eliminating it unless his surrounding stones on the outside were threatened, as in diagram 2 C. There, the cutting stone at T is dangerous: if White has not played at X or Y, then Black can save his group by playing at V, leaving the two white stones with only one liberty, whereas his own group has two, so that Black will capture first. Such positions, on a larger scale, often lead to exciting races to capture.

So when is a group of stones safe? The answer is not a rule, but an inference from rule 8. An apparently suicidal move is permitted only if it simultaneously captures. (Ko captures are themselves examples of this, leaving the capturing stone with one liberty.) The key word is 'simultaneously'.

Thus the next group, in diagram 2D, is different. If White plays first, placing a stone at Y, then, as before, any play by Black inside merely reduces his group by one liberty. White can play in again, certain of capturing. However, if Black plays first at Y, then the group is alive. This is because he creates two separate spaces (known as 'eyes'). Since it is not legal for White to play in both of them simultaneously, the group is alive. ('Eyes' are not necessarily single points. Provided a group of stones can trap invaders in such a way that there are two separate spaces internally, it will survive.)



Diagram 2 position E shows a black group alive even if White plays first. If White plays at X, then Black will play at Y, and vice versa. White would not waste a move trying this - unless he needed a ko threat!

The end of the game sounds tame, with both players passing, but it can often be a close contest up to the last point. Beginners often aren't sure who has won anyway, until the counting is over! To simplify counting, all 'no-man's land' areas between territories are first filled with stones. (If this puts a group in danger of capture, perhaps because of prisoners that have not been removed, then the player will have to place a further defending stone in his territory.) Next, dead groups and any odd prisoners are removed. Since each prisoner counts as one point, the same as a vacant intersection, black prisoners are placed in Black's territory, and white in White's, as the simplest way of deducting them from the score. Finally, territories may be squared off by moving stones about to alter their shape internally, not their size, to make counting simpler.

Diagrams 3 and 4 show a game just finished on a small board, and then the same game 'tidied up', with prisoners replaced. (A 9x9 board is recommended for beginners, giving a quicker and less complex game.)

## STRATEGY

So now you have some grasp of the rules, but how are you going to play? Even the first stone? Unfortunately, many commercial versions of the game offer no enlightenment about strategy. A pity, since it is strategy that makes Go so fascinating!

The edges of the board are a virtual wall. diagram 5 demonstrates that because of this factor, eight points of territory can be surrounded with the fewest stones in the corner, next on the side, and least economically of all in the centre. Consequently the order of priorities is corners, sides, centre. (Of course, one's opponent soon thwarts such a predictable territorial enterprise!)

28 But where to play? Why not wall off two thirds of the board and declare possession? You can, but any territory

that is too big will be open to invasion, and offer enough space for your opponent to form a live group inside it, turning all the intervening space into worthless no-man's land. In Go, there is a beautiful balance between rapacity and vulnerability.

Experience has proved that territory having a boundary along the third line (inclusive) from the edge is the safest from attack underneath. However, some fourth line plays, supported with third line positions, gain much more ground, especially in the early stages of a game. Consequently, the most popular corner plays in the opening are on the 3x3 and 4x4 intersections, or a compromise of 4x3, though there are various other possibilities.

One could be forgiven for having the impression that Go is all about walling off territory. That would be boring, and a sure way to lose, as Black is doing in diagram 6. There, Black has made indisputably safe territory, whilst White has almost no definite territory at all. Commonsense, however, indicates at a glance that White exercises a vague but vast control over the board. And in fact, though nearly all his areas may be invaded, merely by squashing the invasions and containing them White will create far more territory than Black because of the broad disposition of his stones.

The general opening strategy in Go is to stake out claims, challenging your opponent to do something about it. Go is a fighting game, and territory tends to be the space left behind one's forces after a battle. With races to capture, and the flight of eyeless groups trying to link with safe groups, and many other sorts of struggle, from the utter simplicity of an empty board, both the strategy and close tactics become more and more complex until the final crisis is over, when frontiers have become firm, and moves are diminishing in size and importance. This may occur as early as halfway through the game, or quite late on, but beware! Even during the final moves, a surprise attack may be sprung.

One warning: you will need to play half a dozen times before you begin to feel that you know what you are aiming at, and another half dozen before you can hope to form any over-all plans. If you lack that sort of persistence, Go is not for you. But then, if Go could be 'cracked' easily it would not be much of a game! From hand-to-hand skirmishing through to wholeboard strategy, as an intellectual war game Go has everything.

DIAGRAM 1

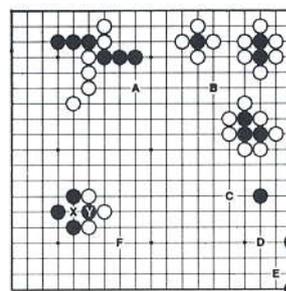


DIAGRAM 2

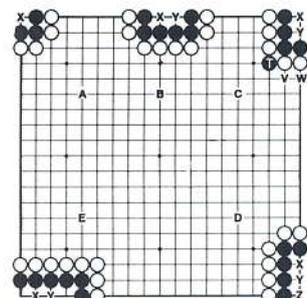


DIAGRAM 3

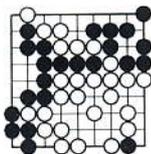


DIAGRAM 4

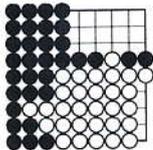


DIAGRAM 5

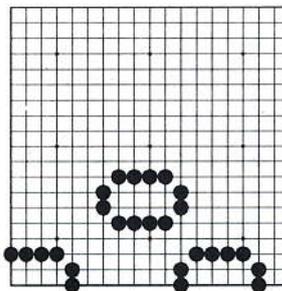
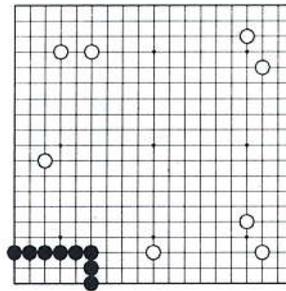


DIAGRAM 6



# ANIMAL INTELLIGENCE

By Mowgli

The following stories show that humans continue to learn from nature.

## Catemp

**C**ats' brains adjust their bodies to postural positions that allow them both to adapt to temperature more appropriately, and to communicate to us, almost exactly, the temperature of a room.

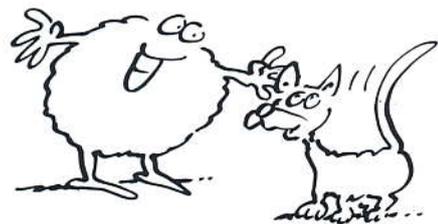
Another 'old wives' tale? Not so says Brenda Marsh, columnist for **Wild About Animals** in the **Reading Herald & Post**.

She cites as evidence research by scientists in Britain and abroad who have discovered that sleeping cats' positions do change according to the temperature.

For instance, a cat will usually only stretch out to sleep if the temperature is above 24 degrees.

At 22 degrees, the hind legs tuck under the body.

At 18 degrees, the front paws are drawn under the chin, and when the temperature falls to 16 degrees, the head lowers to the ground and the tail curls round to embrace the face.



When a cat's tail covers its nose, you can be sure it's a chilly 13 degrees or less.

**Synapsia** invites readers to send in their observations of this phenomenon, as well as any other animal behaviours that accurately communicate to us information about our environment.

## Monkey Business in Space

**The new year** got off to a flying start for a macaque monkey.

The monkey, a resident of a Moscow space institute, was launched for a joint Russian-American space biology project in which the brain's reaction to weightlessness will be monitored.

Previous experiments have shown that humans and other vertebrates undergo fairly dramatic changes to their muscular and skeletal systems.

If the brain undergoes dramatic change, we may be witnessing the first steps in adaptive evolution preparing itself for creatures-from-space-from-earth.

## Monkeys - Tree AND Social Climbers

**As well** as being masters at physical climbing, monkeys it seems are also adept at social climbing.

Dermatologist Frans B M de Waal was studying female rhesus monkeys at the Wisconsin Regional Primate Centre in Maddison when he noticed an unusual and previously undocumented pattern of behaviour: a monkey mother holding her infant would pick up and also hold a wandering second infant for periods ranging from a few seconds to ten minutes in length.

Why was the mother doing this? After compiling statistics on the frequency of what he calls 'double-holds', de Waal now believes that the mother was trying to choose her baby's friends!

His reason? In more than 90% of the cases the mother would pick up an infant from a family that ranked higher than her's in the monkey group's social structure.

"We believe that the purpose of these 'double-holds' is for the mothers to see their offspring play with peers from higher-ranking families rather than low-ranking ones," de Waal says. And the sense of purpose in the monkeys is strong; in several cases, de Waal and his researchers saw a mother spot an infant from a higher-ranking family, rush off to pick up her own infant, then dash back to pick up the other for a 'double-hold'.

Noting that this behaviour has in-

*continued on page 34*

# THE RETURN OF BOBBY FISCHER

Genius will Out

Raymond Keene OBE BCM 275

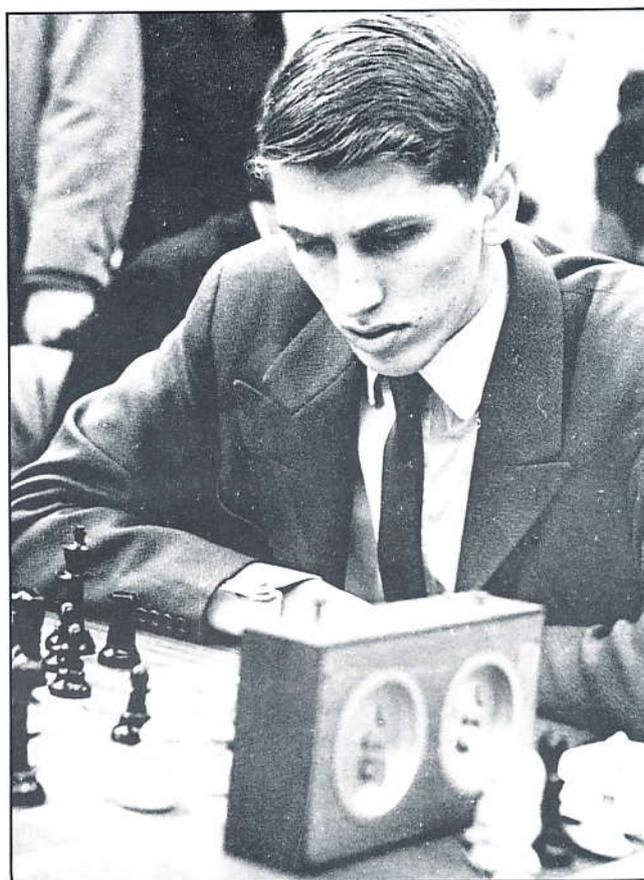
Our chess correspondent has penned an indepth psychological study of a 20th century enigma that will fascinate chess buff and non-player alike.

The summer of 1992 witnessed an unusual burst of activity in the arena of mental sports. In Canterbury, 300 sportsmen and sportswomen of the brain competed in the European Championship of the venerable Japanese game of Go. In London, computers fought out their own Olympic games, while, also in London, Dr Marion Tinsley, the World Champion in draughts, was challenged for his title by a computer. Finally, as the culmination of all this, the greatest mind warrior in the history of the planet emerged onto the warpath once again, but in his own singular and distinctive style. Bobby Fischer, the reclusive and controversial American chess genius, had made his comeback.

Twenty years ago, Fischer had swept to victory against Boris Spassky to become the 11th World Champion. That memorable event was fraught with threats to withdraw, arcane protests and Cold War political overtones. By winning, Fischer became the first American World Chess Champion, and was immediately swamped with proposals that would have made him a millionaire many times over.

Fischer was a brash, unschooled young man from Brooklyn, who toppled the might of the Soviet chess system before his 30th birthday. His story epitomised the self-reliant, frontier ideals of modern America, and provided the inspiration for the Tim Rice/Abba musical **CHESS** which hit the West End stage in 1986. But the dream evaporated when Fischer renounced chess totally.

In 1975, after lengthy wrangling, much of it conducted long-distance by Fischer, FIDE, the World Chess Federation, stripped Fischer of his title when he refused to defend against the new challenger, Anatoly Karpov. Fischer thus earned the dubious distinction of being the only player in the history of World Championship chess to have lost his title by default. Fischer increasingly turned into a recluse, a prey to religious eccentrics and existing off the charity of friends. He became an adept of the Worldwide Church of God and began to distribute scurrilous pamphlets. Many saw in such activities evidence of the ruin of a once superb and dominant intellect, and to most observers his conduct was,



The brash young man

at best, dereliction of duty to his loyal and admiring public, and at worst, insane.

## Nimbus

Yet Fischer's refusal to play was, in some weird fashion, comprehensible: having scaled the peak of Everest there is a reluctance, even a mental block, against performing the feat a second time. Fischer regarded himself as 'World Champion' - period - and saw no need to demonstrate the fact again.

Those champions of the past who have descended from Olympus to defend their hard-won titles have, by losing to

the challenger, compromised their reputations, however infinitesimally. This is the standard human experience. Eventually, the old and strong must give way to the young and strong. Fischer may have wanted to deny the ravages of time and leave his reputation untarnished.

By a feat of mental legerdemain - total and sudden withdrawal from the arena at the height of his powers - Fischer, like his compatriot Morphy, preserved a mythical nimbus of invincibility. But the world passed Fischer by, an isolated figure on his lonely peak, while attention shifted inexorably towards those actively involved, Kasparov, Karpov, Timman, and our own Nigel Short.

### Megabucks

Yet it transpired that Fischer's apparently endless demands, with their attendant upsurge of publicity for chess, had acted as a major catalyst in improving the lot of the professional chess player.

In 1969, Spassky's World Championship prize had been a paltry few thousand roubles, amounting, at prevailing rates of exchange, to just \$1600. In 1972, the prize fund had rocketed to an unprecedented \$250,000. In 1990, the prize purse for the New York - Lyons Kasparov v Karpov match was no less than \$3 million. This was a development that had grown from Fischer's insistence that chess champions should be remunerated on the same scale as other international celebrity sportsmen and women. Yet it was others who benefited from this explosion, not Fischer himself.

Fischer had demonstrated that chess was not just a closet activity for ageing, bespectacled Soviet intellectuals. He had endowed the game with mass appeal in the West. Moreover, he had shown that chess players could make headline news, and that the game could reward individual effort. There was a massive upsurge in the popularity of chess, which still has continuing effects some two decades later. Nigel Short, Britain's top player, is a product of the Fischer boom.

### Suddenly Last Summer

Then, suddenly, in July last year, Fischer announced that he was to contest a self-styled 'World Chess Championship' against his old rival, Spassky. The match would be for the best of ten wins, with the winner receiving \$3.35 million and the loser \$1.65 million. By a huge margin, this is the largest prize ever offered for any chess competition. The money was put up by Jezdimir Vasiljevic, the proprietor of Jugoskandik, a Belgrade bank. Ready, once again, to face the world, Fischer would at last reap the rewards of the harvest he had sown.

Interestingly, the conditions for the new contest were those that Fischer had demanded, but which FIDE had rejected, for the 1975 match with Karpov that never took place. The match condition was that this match would continue until one player won ten games. The remaining match conditions also mirrored Fischer's wishes to an alarming extent. He could not have dictated the terms so unilaterally to Kasparov or Karpov, but Spassky was desperate to play - he had nothing to lose and everything to gain.

There would be four games per week, every game played to a finish with no possibility of adjourning. This undoubtedly reflected Fischer's fear of the use of chess computers during adjournment analysis. Furthermore, the match would be timed by a special chess clock that Fischer had personally developed and patented.

At the start of a game, both players have a reserve of 90 minutes on the clock. Each time a player makes a move, he gains two minutes. In theory, this device (based on Japanese timing of their national mind games of shogi and Go) eliminates the wild time scrambles that characterise so much modern chess, in which players rush to make their moves while simultaneously racing to beat the clock.

As I see it, the common theme of all Fischer's innovations and rule changes is to eliminate what he sees as elements of chance so that pure talent will triumph, Fischer regarding himself as the embodiment of talent and genius over training and routine.

### Motivation

Earlier endeavours to entice Fischer out of retirement had proved consistently fruitless. What seemed encouraging, though, about this latest initiative was that Fischer was back to his old contentious verbal form, lambasting current World Champion Kasparov and Anatoly Karpov. In fact, Fischer had advanced too close to the brink of actually moving a pawn, and could no longer find a pretext to withdraw without suffering a massive loss of face. Fischer, who had previously relied very little on seconds and sports psychologists, now engaged the Philippine Grandmaster Eugenio Torre as his assistant.

Dr Eric Schiller, a Chicago chess commentator, claimed that Fischer had been deeply upset by the recent death, in his mid-fifties, of former World Champion Mikhail Tal. Tal had been Fischer's great rival and close friend in the late 1950's and 60's, and his death appears to have been a key factor in galvanising Fischer into action.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Fischer	1	½	½	0	0	½	1	1	1	½	1	0	½	½	½	
Spassky	0	½	½	1	1	½	0	0	0	½	0	1	½	½	½	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Fischer	1	1	½	½	0	1	½	½	½	1	0	½	½	½	1	17½
Spassky	0	0	½	½	1	0	½	½	½	0	1	½	½	½	0	12½

Fischer v Spassky 1992

A further element in Fischer's return was the desire to engage the world establishment by playing in the former Yugoslavia, on the Montenegrin island of Sveti Stefan and in Belgrade. Nations in disfavour with the world community exert a strange fascination over Fischer - he clearly identifies with them in some inexplicable fashion. In former years, the only offers to play that seriously attracted him were those coming from South Africa.

### Highbrow

In appearance Fischer, not captured by any photographer or seen by any chessplayer in public for so long, is now a revelation. He is balding, bearded, and has a high domed brow, the very model of a severe intellectual. It is some distance

from the lanky, striding athlete of 1972. Such factors can mount up. Time's arrow is becoming increasingly perceptible to the genius of chess, who has existed in his private time capsule for so long.

### Stabat Mater

Women have never played a conventional role in Fischer's life. His mother Regina (Latin for 'queen', a coincidence that



Fischer Mk II

popular psychologists have been swift to seize upon) was virtually a professional international peace protester, prone to chaining herself to the railings of US embassies across the world.

Fischer's subsequent attachment to two members of the US chess sisterhood, Lina Grumette and Claudia Makarow, represented, perhaps, a maternal substitute. Lina became, for a time, his so-called 'chess mother', while Claudia, who, in bizarre circumstances sheltered and fed an impoverished Fischer for years in her basement, exerted a kind of Svengali hold over him.

According to one-time house guest IM David Levy, Fischer's domestic arrangements were as singular as his personality: "Fischer had a huge white dog but absolutely no furniture...the floor was strewn with chess magazines."

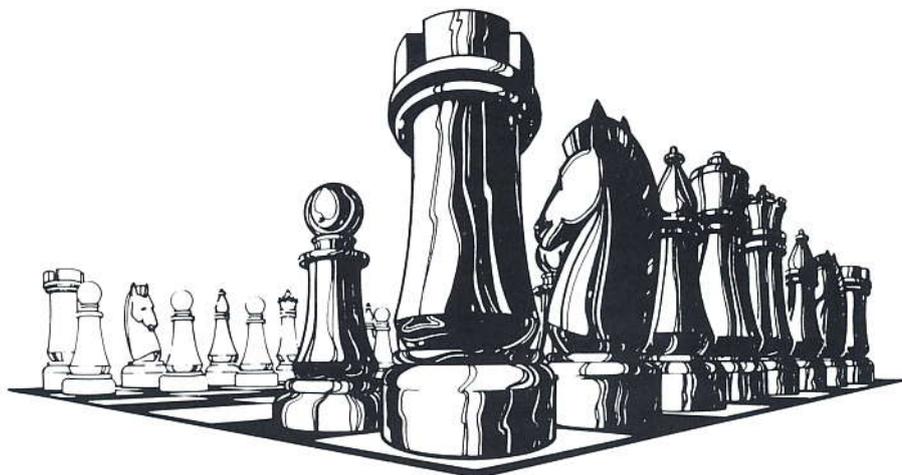
If someone wanted to speak to Fischer there was an automatic \$5000 fee, payable in advance, and Claudia was the sole conduit. Now, however, Fischer, in a novel move for him, has a girlfriend. She is the 19-year-old Hungarian chess master Zita Rajcsanyi- born in 1973, a year after Fischer beat Spassky in Reykjavik. She has a rating of 2205 ELO, which places her well into the upper echelons of female players. Here, a long suppressed macho pride, may be one further reason for Fischer to emerge and excel.

### Quo Vadis?

Now that he has beaten Spassky, Bobby Fischer may go on to a fresh and glorious challenge against Kasparov. That would inevitably usher in a Golden Age for chess. More frustratingly, though, Achilles may return to sulk in his Pasadena tent for a further two decades, while consoling himself with the thought that he is over three million dollars the richer.

Always the wonder of the cerebral world, who can tell? Perhaps not even Fischer himself. ■

We thank the **British Chess Magazine** for permission to use the Fischer v Spassky match chart. Britain's premier chess monthly can now be contacted on 071 603 2877 - Ed.





## Animal Intelligence

*continued from page 29*

teresting human parallels, de Waal says he plans to continue studying the monkeys as they mature, observing trends in on-going friendships, changes in social status, and choices of mate.

### What are Brains For? An Answer

**Readers of** this column will be among those who are curious about, and who delight in, observing nature.

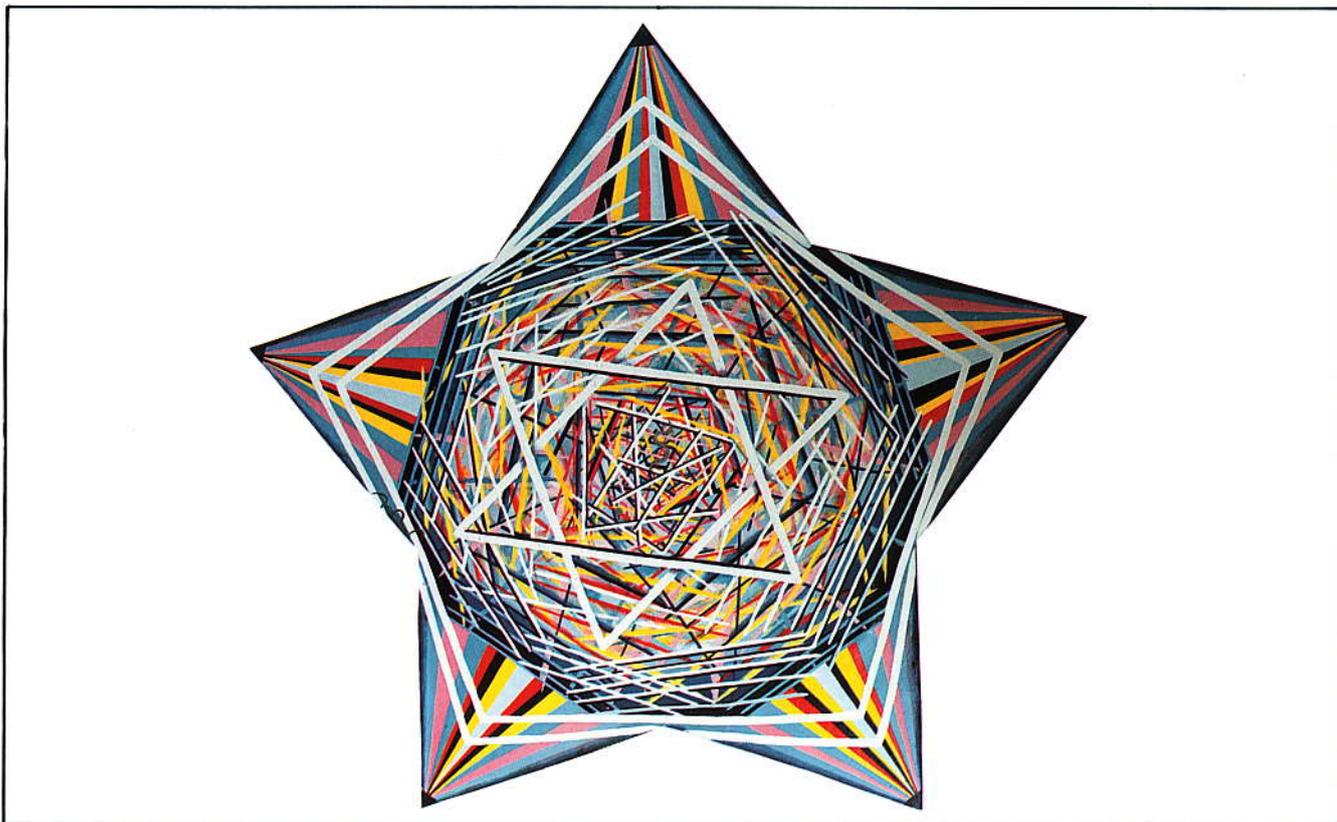
Support for their attitude of mind comes from the **New Scientist** magazine and from the Nobel Laureate Niko Tinbergen. The **New Scientist** asserts that curiosity and the urge to observe are fundamental to the practice of both science and journalism. They state: "Without curiosity there is little motivation to search for answers. And without the knowledge that observation supplies it is difficult, if not impossible, to ask the right questions."

One of the doyens of curiosity and

observation was Niko Tinbergen, a Dutch naturalist, one of the founding fathers of ethology, who, with Conrad Lorenz and Karl von Frisch, received the Nobel Prize for Biology and Medicine in 1973.

Tinbergen, in his 1958 **Curious Naturalists** said: "It seems to me that no man need be ashamed of being curious about nature. It could even be argued that this is what he got his brains for, and that no greater insult to nature and oneself is possible than to be indifferent to nature." ■





## A STAR IS BORN

**This month's** front cover features another masterly painting by Lorraine Gill, and she adds a few insights below for the benefit of readers. Lorraine starts a regular art column in **Synapsia** for all those Brain Club members who wish to hone their innate drawing skills. The first article will appear in the Spring **Synapsia**. Over to you, Lorraine.

"The star is entitled **Integration**. There is a tiny silver serpent on the bottom area, which is important."

"The painting is about the merging of religions into one common good."

"White is the colour of purity, geometrically holding the centre." ■

**STOP PRESS**  
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**STOP PRESS**

**The Brain Trust** win the 1993 Hardinge Simpole Publishing prize! This award is presented annually to the organisation that has, in the judgement of the two publishing partners, contributed significantly to chess in the year the prize is given. Past winners are Thames TV, Infolink and Thames TV jointly, Duncan Lawrie, and Watson, Farley & Williams. The award was made on 11th April on the occasion of the speed match, sponsored by The Brain Trust, between a leading junior and Tony Buzan. The award certificate mentions specifically the contribution to junior chess made by The Brain Trust. Prior to the match, Stephen Hawking was announced as the Brain Trust Brain of 1992! A full report will appear in the next issue. ■



## The Decade of the Brain

"July 25th 1989, resolved by the Senate in the House of Representatives of the United States of America in Congress assembled, that the decade beginning January 1st 1990 hereby is designated the Decade of the Brain, and the President of the United States is authorised and requested to issue a proclamation calling upon all public officials and the people of the United States to observe that Decade with appropriate programmes and activities."

## NEXT ISSUE

**A new regular feature by Brain Club artist Lorraine Gill**

**A new Editor!**

**Short v Timman: a mighty chess match described by Ray Keene**

**Brain Club University details - where and when in Greece**

*More scenes of Los Horcones, the self-supporting community in Mexico living by the precepts of behaviourist B F Skinner (see last issue).*



Communal dining Room.



Childrens' house and play house. All members take care of the children and educate them.



Unit of private bedrooms for members of the community.



Some members talking around the fountain in the small plaza.



Walking to the dining room.



Kiosk and dining room building.