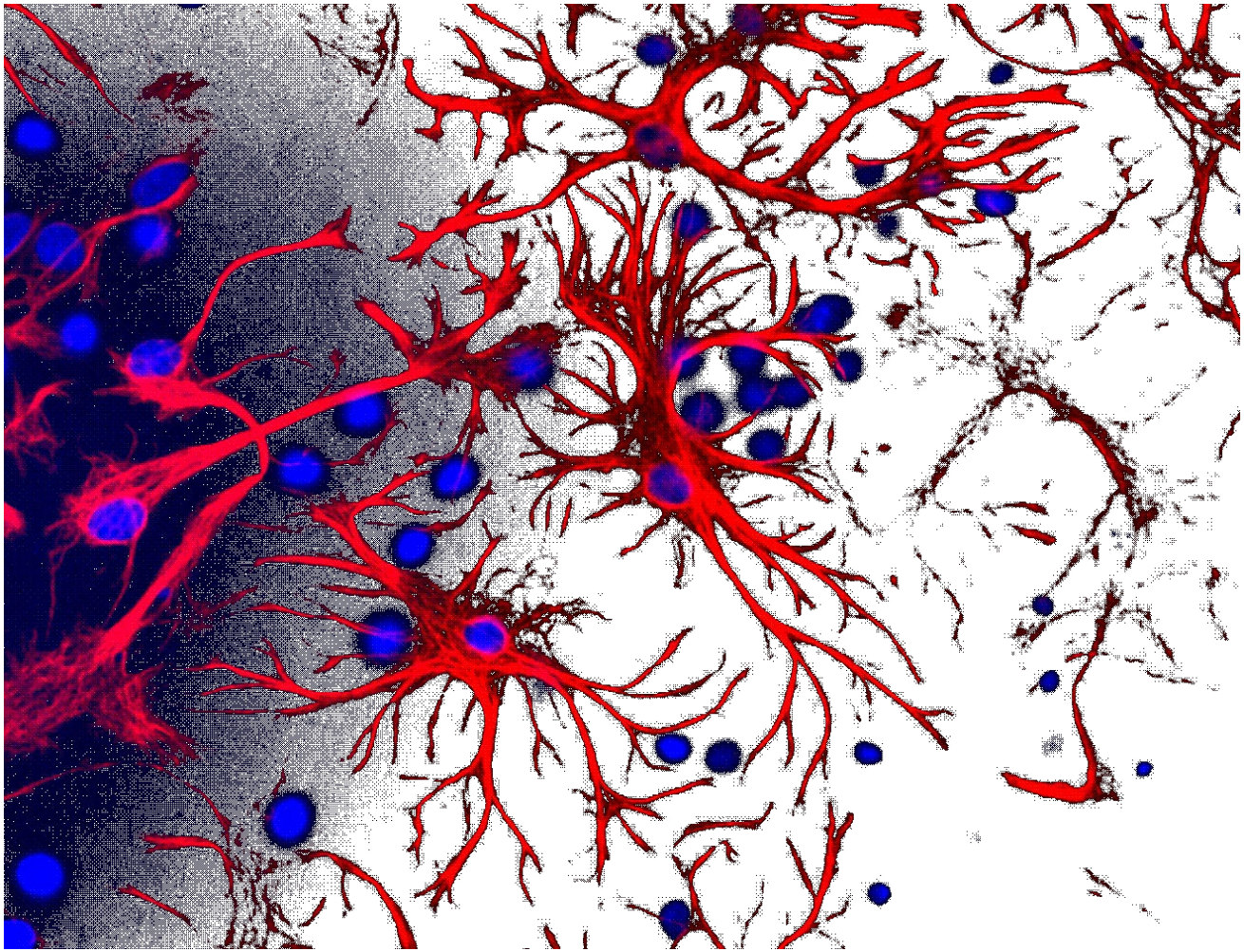
Project Brief



What it is all about

Fig. 1a. Neurons and glial cells.

Project Brief

1.) Introduction

"The brain regulates all bodily functions; it controls our most primitive behaviour – eating, sleeping, keeping warm; it is responsible for our most sophisticated activities – the creation of civilisation, of music, art, science and language. Our hopes, thoughts, emotions and personality are lodged – somewhere – inside there. After thousands of scientists have studied it for centuries, the only word that remains to describe it remains: 'AMAZING'." (Ornstein quoted in Buzan 2001 p.11)

Research increasingly indicates that the potential of the human brain is much greater than was ever thought (Fig. 1.1). The complexity and power of our brains is one of the bases of our success as species. Many problems faced by the world today can be solved through the correct and powerful use of this amazing organ.

When Rogers states "Humankind's capacity to transmit accumulated knowledge from generation to generation, to anticipate and to solve problems has been its greatest asset." (1997 p.21), he refers only to the faculty of memory (Fig. 1.2 and 1.3). The powers of thinking, imagining, understanding, in fact most of the scope of mental ability, is not even being considered.

Most of what we know about the brain has been discovered in the latter part of the 20th century (Buzan 2001 p.14-15). These discoveries can already be applied to improve the way we interact with the world, with each other and with ourselves. The research continues and much more will be done before we understand the wonder that is our brains.

South Africa's history, and much of that of the world, has been radically impacted by mineral riches and the desire to extract them. The time for the gold rush to the mind has come. This leads to the proposal for a centre where research of the brain can be conducted and where these and other discoveries can be disseminated and applied.

Fig. 1.1. The human brain

Fig. 1.2. and Fig. 1.3 The original Great Library of Alexandria and the reading room of the new Alexandria library: ideas and knowledge can survive many generations.

Fig. 1.4 Stonehenge as an artefact of a cosmological culture.

Participants in the research will be the experimental subjects. They will also receive training based on the discoveries made. This knowledge can then be taken back to their families, businesses and communities, increasing the use of the brain, for the betterment of the world in which we live.

Benefits expected from the program affect a wide range of human endeavour and concern. Among the fields touched upon, are health, relationships, entrepreneurship, communication and self-fulfilment.

2.) The Problem

2.1.) History of our knowledge of and approach to the brain

The evolution of the brain as we know it today began some 500 million years ago (Buzan 2001 p.13). The modern brain has been around for roughly 50 000 years (*ibid* p.15)

Ancient and cosmic cultures, along with most religions, considered human beings to be part of the environment, functioning as a system (Fig. 1.4). People were aware of the links that existed between each other and those with the environment. These relationships implied certain boundaries, which were respected. The mind was considered to be part of the self, along with the body (Bateson 1979 p.151-3).

Around 2500 years ago, Aristotle concluded that the mind was located in the heart (Buzan 2001 p.13). The Greeks coined the phrase *mens sana in corpore sano* (a healthy mind in a healthy body), recognising the unity. Plato, on the other hand, considered the mind to be something separate and removed from the body (Fig. 1.5).

As with so much else, Plato's view was accepted. Other traditions also reflected this idea. During the mummification rites, the old Egyptians saved the 'important' organs of the deceased, while the brain was scooped out and disposed of. The brain was considered useless – a "structureless, characterless lump of gray matter" (*sic*)(*ibid* p.31).

Fig. 1.5. The School of Athens by Raphael.

Very little changed in these views until the brain was eventually recognised as the seat of the mind at the time of the Renaissance (*ibid* p.14).

The unexpected complexity of the outer layer of the brain, the cortex, was revealed with the invention of the microscope (*ibid* p.31). The invention of the electron microscope led to the discovery of the neuron (Fig. 1.6), or brain cell, which consists of a centre (nucleus) and many branches (axons and dendrites) radiating from it in three dimensions (*ibid* p.32).

The 20th century saw great developments in our knowledge and understanding of the brain. The first half of the century still held to a very mechanistic worldview. The brain was seen as a simple 'filing system' – messages went in and were sorted into the appropriate 'pigeon-hole' (*ibid* p.14).

The most astounding discoveries are very recent. Buzan states that "95 percent of all that the human race has ever discovered about the internal workings of its own brain has been discovered in the last 10 years!" (2001 p.15).

One of the discoveries of the late 20th century was that the brain consists not of several million brain cells, but of a billion (1×10^{12}) (*ibid* p.15). Many fallacies were disproved and researchers became increasingly aware of the innate potential of the brain.

"At the end of the 20th century the human race made an astounding discovery: that the brain is actually *connected* to the body!" (*ibid* p.xi).

Research shows that in a healthy body with a well-used brain, there is no apparent loss of brain cells due to ageing as was previously believed (*ibid* p.35). In fact, biologists at Princeton University showed that parts of the human brain can generate thousands of new brain cells (Fig. 1.7) every day (*ibid* p.35).

The human brain cell is identical to that of many other animals, including bees. Entomological research has shown that bees only have several thousand brain cells. Amazingly, a single brain cell can take control of the entire complex system (*ibid* p.35-40).

The division in thinking about thinking is set.

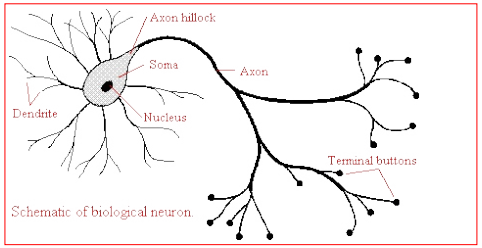


Fig. 1.6 The neuron.

Even the individual brain cell is capable of performing complex acts.

The Max Planck Laboratory managed to isolate a living brain cell and film it under an electron microscope. This video shows the cell, reaching out with its axons and dendrites, searching the space around it for something to connect with (*ibid* p.42). The brain searches for links and relationships, even at the level of its smallest component (Fig. 1.8).

We do not consider the brain to be a simple adding machine anymore, but recognise that is an incredibly complex synergetic system (*ibid* p.4-5).

2.2.) Do we not automatically use our brains in the best way?

The paradigms about thinking that evolved during the last 2 500 years, conditioned us to think about our minds in certain ways. Many of these thoughts have been disproved by recent research. The problem is that we think in ways that seem correct (Buzan 2001 p.9).

Blackmore expands the concept of memes[1] with another analogy to the world of genetics – the memeplex[2]. The hypotheses states that the memes in a memeplex, just like

[1] Meme is the term used for a unit of idea or culture and is analogues to the gene for biological information. It can replicate and be passed on from one system to another.

[2] Memeplex is the idea analogue of a geneplex – a 'co-adapted memetic complex'. Several memes can group and be transferred together due to their increased likelihood of transmission in such a complex.

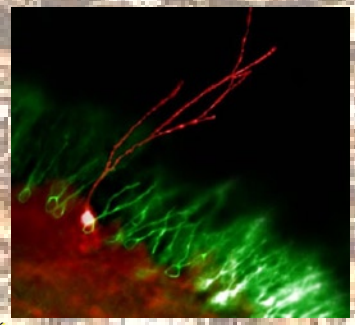


Fig. 1.7. Birth of a neuron.

Fig. 1.8. An electron micrograph of a neuron.

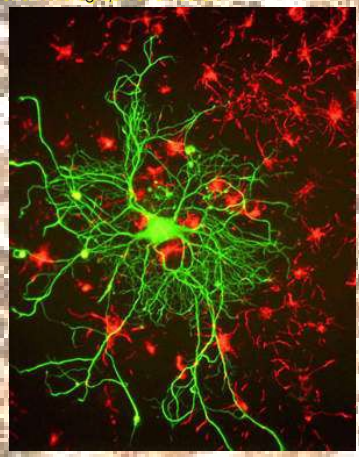
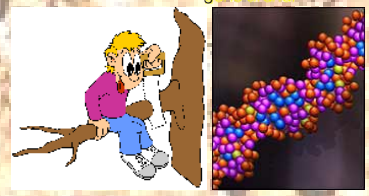


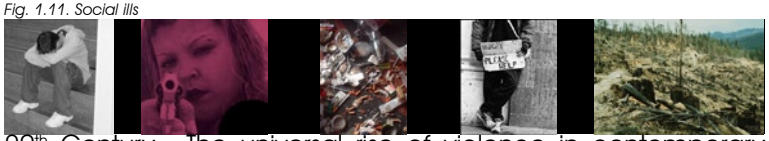
Fig. 1.9. Representation of a gene strand.



the genes in a geneplex (Fig. 1.9), can 'cooperate' for mutual survival and copying. The survival of the meme is not necessarily in the best interest of the organism carrying that meme (Fig. 1.10). It is in the interest of the meme that the organism believes the meme is good, though. This serves to explain how we can become so attached to a certain way of thinking, even when it can be shown not to be in our best interest.

The way we think, and think about thinking, contains some inherent pitfalls. These problems find expression in the external world. Depression has been described as the disease of the 20th Century. The universal rise of violence in contemporary times is a growing crisis, while at the same time, drug abuse, unemployment, poverty and a breakdown in education all cause concern (Fig. 1.11). These are then the cause of more problems, like environmental abuse (Rogers 1997 p.7).

Fig. 1.11. Social ills



The mind has a built-in tendency that causes it to function counter-productively. "The natural tendency of mind is towards certainty, security and arrogance […]. The mind wants to recognise and identify with certainty as soon as possible […]. Because of this natural tendency of mind we need to devleop a conscious tool." (*sic*) (De Bono 1989 p.26)

There is more reason to change our thinking: "Existing systems produce existing results, if something else is required, the system must be changed" (Sir Christopher Ball in Dryden & Vos 1999 p.278).

The world is facing an ever-increasing rate of change. The continent of Africa is faced with industrialisation, automation, the information age and the move to a service based economy, all at once. Re-engineering our thinking will provide us with the tools to deal with these changes and it will aid us in finding solutions to the challenges that confront us.

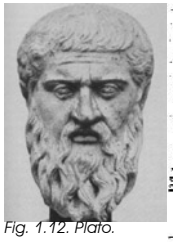
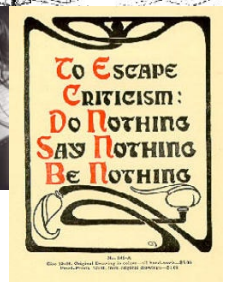


Fig. 1.12. Plato.

Fig. 1.13. A Medieval school under ecclesiastic control.

Fig. 1.14 .The clash system.



"I DON'T LIKE YOUR SHOES! YOUR SHIRT HAS TOO MANY FLOWERS. YOUR PANTS ARE TOO SHORT!"

Fig. 1.15. How to avoid criticism.

Fig. 1.16. Critical thinking.

Fig. 1.17. Factory workers during the Industrial Revolution.

Fig. 1.18. Housing in Newcastle built during the Industrial Revolution.

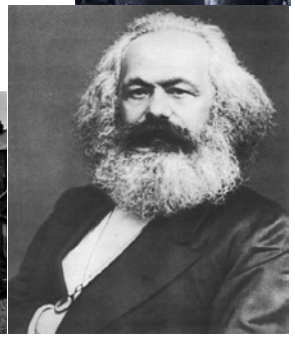


Fig. 1.19. Karl Marx.

3.) Where does inefficient thinking come from?

Traditional views of the mind and its place was eventually superseded by the views propagated by Plato (Fig. 1.12). The mind was increasingly seen to be separated from the body. Our collective self-image turned away from the knowledge that we are part of a system and are systems ourselves.

During the Middle Ages, education was under ecclesiastical control (Fig. 1.13). The Academic method was developed with the main aim of keeping down the rise of heretical views (De Bono 1989 p.77).

Unfortunately, this mode of thought spread in use. Its use was not confined to religious debate or serious academic debate alone. "Western civilisation in its philosophy and its practice has been obsessed with the 'clash' system in which two opposing views fight it out." (*ibid* p.77) (Fig. 1.14). The major disadvantage of this thinking model is its resistance to change: "In most areas the major defect of the clash system is that in order to even begin to think about change, the existing idea must first be attacked. Not only must it be attacked, but it must be shown to be inadequate. […] an idea may have been a good one in its time and may still be a good idea. But this does not preclude the possibility of a much better idea." (*ibid* p.77). The rediscovery of the Socratic dialogue, which share many premises of the academic method, at the end of the Middle Ages, strengthened this way of thinking (*ibid* p.77).

Critical thinking is not bad as such, but it relies on the creation of new ideas and concepts (Fig. 1.15). It is in this respect that it is over used: "It is not as if there was such an ebullience of creative thinking around that we needed the critical thinkers to keep things from running wild." (*ibid* p.79). The method further limits change by abolishing ideas as wholes. A good idea with a minor flaw might be discarded *in toto*. If we were to adapt methods to try to find solutions to these flaws, we stand to gain many useful ideas (*ibid* p.79).

Critical thinking has some unexpected advantages that contribute to its popularity (Fig.1.16): "Negative criticism offers the opportunity for a great deal of apparent thinking […] it gives an immediate sense of both achievement and superiority." (*ibid* p.79).

Bateson terms the Industrial Revolution (Fig.1.17 and 1.18) "the triumph of engineering over mind" and believes that we, and our thinking, were further separated from the world and the systems we are part of during this process (Bateson 1979 p.20). The social changes that took place, gave rise to Marxism (Fig. 1.19). In its attempt to repair social relations, the relevance of the individual mind was denied (*ibid* p.44). This disconnected the mind from its primary relationship – that of self.

Throughout this period, religion served to maintain some paradigms and thought disciplines. These provided some thought training. The world was becoming secularised, however, and religion was spurned[3]. The mind became directed towards "the 'intellectualising' type of thinking that exists for its own sake. This is the type of thinking […] where thought is used to justify any position." (De Bono, 1989 p.90). We ceased to consider the non-scientific understanding of phenomena and the awareness of relationships as functions of the brain.

4.) Problems with existing thinking

The current rate of change and technological advance means that we embrace change before we have the chance to consider its consequences thoroughly (Bateson 1979 p.193). We often realise the damage we are doing only after it is done (*ibid* p.242).

Our predominant mode of thinking is not up to the challenge, and it is not changing fast enough (Fig. 1.20 and 1.21). "One of the only places operating largely as it did more than 50 years ago would be the local school." (Numella and Caine quoted in Dryden & Vos 1999 p.78). We need to change our thinking, encourage it and increase its capacity, in order to deal with the global problems we face. If we want to stop destroying our world, and ourselves, we need a greater ability to realise the consequences of our actions, rather than using our thinking to justify pre-made choices, as we so often do[4].


Fig. 1.20.


Fig. 1.21.

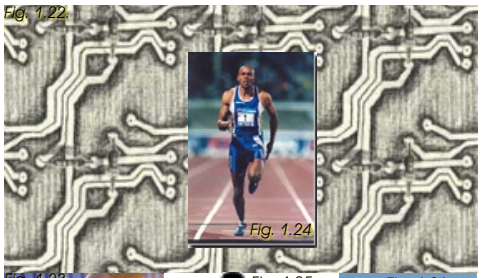


Fig. 1.22.

Fig. 1.24

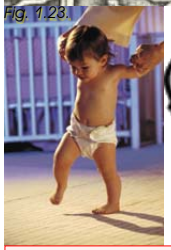


Fig. 1.23.


Fig. 1.25


Fig. 1.26

[3] "We have lost the core of Christianity. We have lost Shiva, the dancer of Hinduism whose dance at the trivial level is both creation and destruction, but in whole is beauty. We have lost Abraxas, the terrible and beautiful god of both day and night in Gnosticism. We have lost totemism, the sense of parallelism between man's organization and that of the animals and plants. We have lost even the dying God" (Bateson 1979 p.18)


Fig. 1.27.

The change that pervades society is not only a problem, but also part of the solution (Fig. 1.22). According to Rogers:

"Communication technologies are transforming our economies, our ways of learning, our methods of work, our capacity to alter the environment and even our daily chores and pleasures; they are unmistakably reshaping our lives. But they are also at the core of a fundamental new gearing of the human mind." (1997 p.147).

5.) A change in thinking

The invention of the camera in the 19th century led to the questioning of the relevance of direct representational painting. In an analogue way, the invention of the computer raised questions on the nature and purpose of human thought (De Bono 1989 p.39). This rethinking of the minds' place was aided by the development of psychology, holism and environmental thinking.

It may be argued that training people in thinking will cause them to become self-conscious and thus stifle even the ability that they had before training starts. One learns to walk first through crawling and standing holding on (Fig. 1.23 and 1.24). Cycling is learned through trial and error (Fig. 1.25 and 1.26). Most learning is accompanied by an awkward phase. Once the awkward phase is over, the benefits are much greater than the effort put in or the loss in ability during the learning phase.

When Day discusses artistic ability, he states that commitment is much more important than inborn genius (1990 p.8). It is this commitment that carries one through the awkward phase. The founder of the Alexander technique, Mathias Alexander, states "The (next) great phase in man's development [is] when he passes from subconscious, to conscious control of his mind and body." (Quoted in Buzan 2001 p.xii).

[4] De Bono considers the use of thinking to back up an opinion that has already been formed, to be one of the worst mistakes of thinking (1989 p.19).

6.) The promise of new thinking

Improved thinking can be profoundly beneficial to the individual. Research shows that health, happiness and even material wealth is a function of the effectiveness of thinking habits.

Many diseases have psychosomatic components and correct thinking can (at least partially) cure them. A patients' chance of recovery from serious diseases like cancer, is directly linked to their mental approach to the disease and the healing process (Buzan 2001 p. xii). Buzan also shows that positive thinking habits alone can strengthen the immune system (2001 p.82). Diseases like Alzheimer's can be significantly affected by brain use patterns. Furthermore, research is increasingly indicating that we choose our own levels of happiness.
On the level of thinking, creativity and understanding, it is useful to remember that the brain is synergetic (Fig 1.27). Use of one part of the brain will not improve only the functions of that part, but will be felt throughout the system. The 'great geniuses' have all used both brain hemispheres (ibid p.23). One example of this would be Albert Einstein (Fig. 1.28), who often came to great insights through daydreaming and visualisation. He, for example, realised that the speed of light is constant for all observers; by imagining what he would see if he travelled on a light particle!
On a societal level, the benefit increases. Bateson explores the concept of mind and sets certain criteria[5] that have to be met for 'mind' to exist (1979 p.97). According to these, it is possible for different peoples' minds to join in the formation of a new mind (Fig. 1.29). The development of this type of meeting holds great promise for organisations. It might even be said to be one of the key objectives of negotiation and democracy.

"Realising the untapped wealth of knowledge and ideas which lie within the citizenry is the key to solving urban problems." (Rogers 1997 p.108).

7.) The objective

"A Beautiful city, where art, architecture and landscape spark the imagination and move the spirit." (Rogers 1997 p.167).

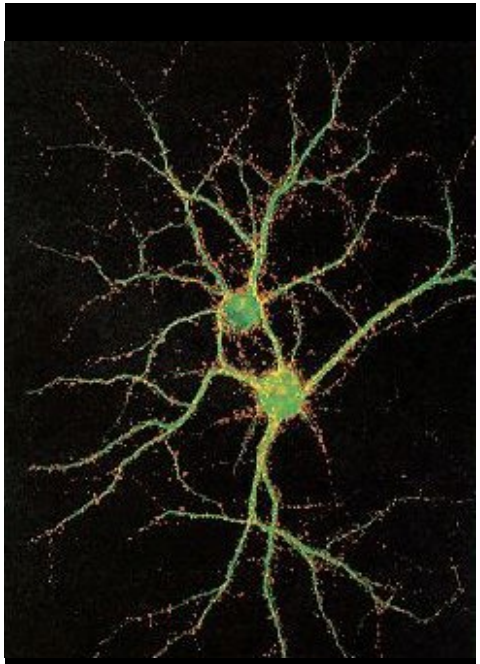


Fig. 1.28. Albert Einstein.

Fig. 1.29. Two neurons merging their 'minds'. Note the similarity with urban design sketches.

A centre has to be created where research and training can be done on human thinking and mental process. This is not solely needed because of the intellectual challenges facing the world, but because "… there is a tragic waste of brilliant minds when we neglect to treat thinking as a skill that can be improved by direct attention." (De Bono 1989 p.15).

Clear relations have been shown between thinking and external factors like music, ventilation, lighting and posture. As the brain links with the world through the body and senses, these interactions should be incorporated by creating sensory spaces. Research and precedents should investigate this.

More importantly, it should be researched whether a relationship exists between the space where one thinks and the thinking done. This is one field of research that will be conducted in the building. The existing knowledge of this field should be incorporated in the design.

The link between space and mental state is often felt, but not so often shown. Day quotes the often-used statement that a good teacher in an ugly shed is better than a poor teacher in a beautiful place. He then responds to this by stating that most people are average and in need of support (1990 p.7). According to him, we feel, think and act differently in different surroundings (*ibid* p.7). The centre should provide a supporting environment. Research and precedents should be found to guide the design in this respect.

[5] Batesons' criteria of mind are the following (1979 p.97):

A mind is an aggregate of interacting parts or components.

The interaction between parts of mind is triggered by difference, and difference is a non-substantial phenomena not located in space or time; difference is related to negentropy and entropy rather than to energy.

Mental process requires collateral energy.

Mental process requires circular (or more complex) chains of determination.

In mental process, the effects of difference are to be regarded as transforms (i.e. coded versions) of events that preceded them. The rules of such transformation must be comparatively stable (i.e. more stable than the content) but are themselves subject to transformation.

The description and classification of these processes of transformation disclose a hierarchy of logical types immanent in the phenomena.

Negative examples of place affecting mood are quite common. There are the phenomena of vertigo and claustrophobia, where space and environment instils fear. Albert Speer's work (Fig. 1.30) in Nazi Germany offers a prime example of architecture designed to manipulate feeling in order to facilitate a desired outcome, which might not otherwise be attained. Of the few examples of positive mental state influences, the interior spaces of churches (Fig. 1.31), which aid worshippers in attaining a spiritual state of mind, are probably the most well known. Both positive and negative examples of this will be studied to reveal ways in which it can be utilised

If we accept that buildings are the third skin (Day 1990 p.42) -after clothes and biological skin- we should also accept that they will affect us in similar ways. A building might cause us to feel cold, confident, exposed or secure. It is therefore assumed that a link between building and mood does exist.

These relationships, scientifically proven and internally felt, should be used in the design of the building. This should be done in a manner that it will facilitate and ease the attainment of the goals of the centre – improved thinking.

It should be investigated through research and precedent whether the spaces used and provided for physical exercise in gymnasiums and the like is suitable for mental training, and what the relation between these spaces should be. The possibility of a link is assumed because of the interrelatedness of mind and body.

The approach to the design of the centre should be holanthropic[6]

"Architecture extracts beauty from the application of rational thinking. Architecture is the play between knowledge and intuition, logic and the spirit, the measurable and the unmeasurable." (Rogers 1997 p.67)

Perhaps the most important aspect of the building is its ability to stimulate and maintain links – links between people, people and the building, people with themselves and with the world. This is not in line with most contemporary building – Day identifies the

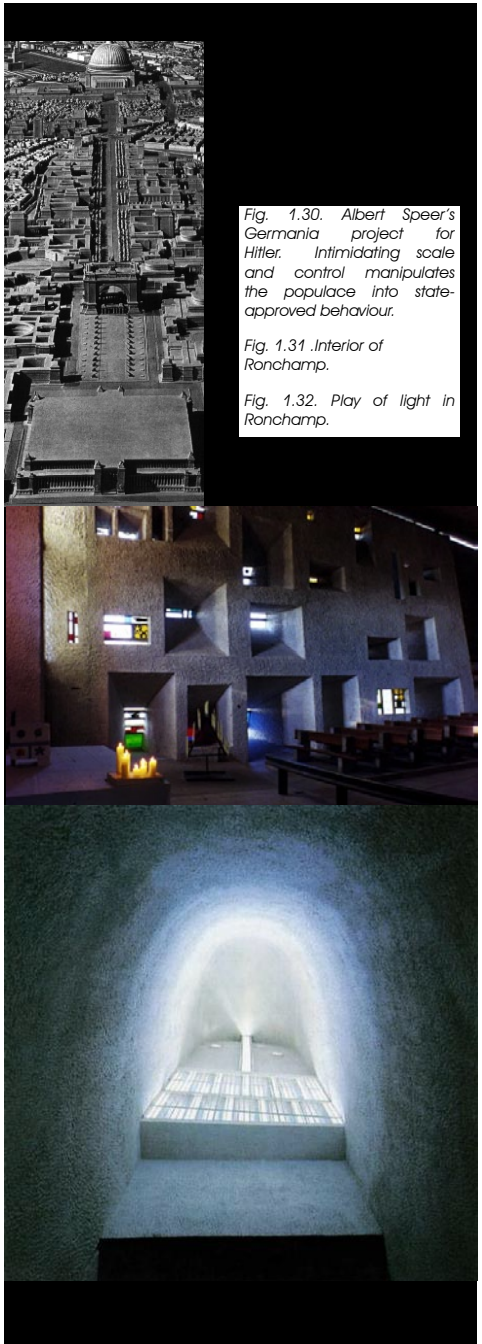


Fig. 1.30. Albert Speer's Germania project for Hitler. Intimidating scale and control manipulates the populace into state-approved behaviour.

Fig. 1.31 .Interior of Ronchamp.

Fig. 1.32. Play of light in Ronchamp.

most common complaints in new buildings to be related to environmental aspects, like anonymity (1990 p.8). A system of proportion is one way in which relationships between different elements can be created. This should not preclude further linking. Spaces for people to meet or experience confrontation should be created to encourage new contacts and interaction.

People can be helped to restore their mental and emotional balance and relationships by spaces that provide calm and stimulation (Fig. 1.32). Relaxing atmospheres, ambiguity and a sense of rootedness contributes to this (Day 1990 p.26). Different scales of spaces with different characters and textures should be provided.

Changing any habit takes time. The same is true for changing thought patterns and behaviours. The centre should provide for follow up and continued contact with participants and for facilities to house these.

Individuals like Edward de Bono, Tony Buzan and many others have proposed techniques for training of the mind. These should be explored as the basis for the training components of the facility. Research will determine the spatial requirements and limitations of these techniques.

Other training should include knowledge of the brain: its structure, different states (brainwave patterns), how to attain these, their relative benefits, and the like. These lead to the need for lecture rooms, auditoria and other similar facilities.

Neuro-science and neurological research also forms part of the scope of the centre, and the requirements for these more clinical functions have to be established through research.

Integration with the city is important. Spatial and functional relationships have to be established with neighbours and related institutions. The centre should not be something separate from its environment as "Cities themselves can be a great tool, a live laboratory for education" (Rogers 1997 p.17-18). Observation

[6] From the Greek *holos* meaning whole and *anthropos* meaning 'human'.

can form a major part of the research and training, therefore the design should allow observation to take place.

8.) Users

Although the research output of this type of building is applicable to everyone, a limit needs to be placed for operational and logistical reasons.

The centre should not be aimed at any particular level of intellectual development or IQ interval as the aim is to do mind research on a broad basis. Part of the purpose of the building will be to break down the view that intellectual potential[7] determines intellectual success (De Bono states that "… thinking is a skill like driving a car, juggling, cooking, skiing, playing darts or knitting. Some people will be better than others. But everyone can acquire a reasonable amount of skill if he or she wants to." (1989 p.11).

The building might also serve to popularise thinking in the same way that physical achievement is appreciated. It should express the fact that mental achievement is not in some way less deserved than physical achievement[8]. De Bono describes a thinker as somebody who is confident in his/her thinking and can switch it on or off at will, independent of the individuals' latent potential (1989 p.16). The building should aim to add some glamour to the process of thinking.

The centre's users will be drawn through co-operation with educational and research bodies. Organisations that are interested in entering into mutually beneficial strategic partnerships will be invited to send participants. Research into mind/body performance interchange could be undertaken in cooperation with institutions like the High-Performance Centre[9] [10].

Research will also be undertaken in association with the Pretoria Academic Hospital. Much of the equipment needed in mental research is extremely expensive, and is already available at the hospital, without the need for duplication. It has also been proved that many diseases have psychosomatic components. This could lead to research on the impact of thinking on health and the betterment of health. The centre could help patients with mental techniques to aid in their treatment and the effect of these can be monitored. There are also indications that certain uses of the brain can delay the onset and progression of diseases like Alzheimer's'.

Fig. 1.33. Logo of the Buzan Centres.

Fig. 1.34. Logo of the CSIR.

Fig. 1.35 .Logo of the De Bono Institute.

Fig. 1.36 .Logo of the University of Pretoria.

Fig. 1.37. Logo of the HSRC.

[7] "Highly intelligent people may turn out to be rather poor thinkers. They may need as much, or more, training in thinking skills than other people." (De Bono 1989 p.13)

[8] The "Bright people (nerds) are unfit; fit people are thick!" myth (Buzan 2001 p.151)

[9] The High Performance Centre is a centre dedicated to the training and improvement of high performance athletes and sportspersons at the University of Pretoria.

[10] It has been shown by researchers at Manchester Metropolitan University that thinking can increase physical fitness. Through thinking about exercise, the neural pathways between the brain and the muscles are strengthened. This leads to an increase in the amount of muscle power that can be drawn upon (Buzan 2001 p.83).

9.) Client profile

The centre will function as a full-blown research/educational institution. Several organisations and groups are available as investors and collaborators. It is suggested that the client be a syndicate consisting of several of these.

9.1.) The Human Sciences Research Council (HSRC)

"[The HSRC] primarily conducts large-scale, policy-relevant, social-scientific projects for public-sector users, non-governmental organisations and international development agencies." (HSRC 2004)

The HSRC focuses on the following research aspects: "notably poverty reduction through economic development, skills enhancement, job creation, the elimination of discrimination and inequalities, and effective service delivery." (HSRC 2004). Of particular interest to the creation of a Mind Development Centre is the skills enhancement and job creation aspects.

9.2.) The Department of Education

The Department of Education aims to make lifelong education a reality for all South Africans. It is one of the departments objectives to create a vibrant education system that can confront the challenges of the 21st century (Department of Education 2004). These are objectives shared with the Mind Development Centre.

9.3.) The Department of Health

The Department of Health has, as one of its main aims, the promotion of preventive and promotive health (Department of Health 2004). The psychosomatic component of many diseases and the mind's power to help combat disease, along with the

physical research conducted, creates a viable link between the Mind Development Centre and the department.

9.4.) The University of Pretoria

The University of Pretoria is a leader in research and education. The University recognises the importance of thinking as a skill, and was the first institution anywhere to appoint someone Professor of Thinking (De Bono 2002). This clear commitment makes them an obvious candidate for a stakeholder of the Mind Development Centre.

9.5.) The CSIR

The CSIR is the largest research organisation in Africa. Innovation, inventiveness and initiative is among its main stated objectives and mandates (CSIR 2004). The CSIR has an existing co-operation agreement with the University of Pretoria.

This commitment and focus is exactly the type of inset needed in the Mind Development Centre.

9.6.) Buzan Centres International

The vision of the Buzan centres is the expansion of the mind (Buzan Centres International 2004). This is done through cooperative partnerships. The focus on the teachings of Tony Buzan means that the Buzan centres is an obvious partner in the Mind Development Centre.

9.7.) The De Bono Institute

The De Bono Institute has among its primary objectives the identification, nurturing and development of thinkers and research into thinking processes (De Bono Institute 2004).

It is clear from the above that all the above organisations have a stake in the development of better thinking and learning skills. There are many shared objectives between these organisations and the Mind Development Centre.

These organisations can be shareholders in the centre, either by capital investment, contribution of experts or any other suitable means. An independent organisation, The Mind Development Centre will be created, which will be the direct client.

Furthermore, the centre can make use of sponsorships.

10.) Schedule of accommodation

Although a detailed schedule of accommodation would need to be researched, the following broad categories of space should be kept in mind:

10.1.) General spaces

Circulation

Entrance/ Exit

Lavatory facilities

Storage

Parking and drop-off

Bicycle storage

10.2.) Administrative

Offices

Staff area

Maintenance and cleaning

10.3.) Training

Lecture rooms

Interview rooms

Computer centre

Library

10.4.) Research

Laboratories

Equipment rooms

10.5.) Ancillary

Restaurant/ Coffee shop

Bookshop

Relaxation/ meditative areas

10.6.) To be investigated

Conference facility/ discussion areas

EEG Rooms or similar (if required)

Gymnasium

Dormitories

11.) Conclusion

A centre is to be designed that will provide facilities for the research and dissemination of knowledge pertaining to the mind and thinking.

Existing knowledge and research showing the link between the mind and physical space should be found and applied to the design. Research and precedent studies should aid in the understanding of space and its influence on mental states.

Research should aim to understand the currently available techniques used to stimulate thinking and creativity in order to understand its spatial implications.

The understanding that the brain is a connecting machine leads to the need for spaces that will connect, and connect the user, with the larger urban fabric, other users of the building and themselves. Research and precedent should identify projects and ways in which this can be achieved.

Where information on the subject is not available, the approach will be followed of using the brain, the neuron and its functioning as an analogues model on which to base decisions.