

Introduction



Gliding performance/progress optimisation

(Or - you won't fly like a swallow if
you think like a Neanderthal.)

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Think of yourself differently

Think of yourself as a sophisticated
robot, just a piece of equipment.



Just a Machine!



Gliding performance/progress optimisation

When you go flying you employ two main items of
equipment:

The glider and an Intelligent Control System,(the pilot).
This talk is about how to optimise the functioning of the
Intelligent Control System, specifically the mind of the
pilot.



The structure of the talk

- An understanding of the nature of the mind.
- How this impacts on different aspects of your flying.
- How you can begin to take some control of your mind.



- When we fly gliders we can significantly improve our performance if we have an understanding of the nature of the glider as a machine and how it works.
- A similar understanding of the way in which the mind works and its impact on our performance may also help to improve our performance as glider pilots.



The nature of the mind

- When people try to imagine how the mind works they often think of it as being like their Personal Computer – PC.



- Purpose built
- Integrated
- Single processor
- Single memory
- Free access to memory
- Rational calculation
- Single language
- One operating system



The human mind is not like your PC!

Despite what some of us like to believe the human mind is probably not the product of rational design it is more likely to be the product of the process of evolution.



The origins of the mind

The human mind/ body is a biochemical device that is the product of an experiment with an infinite budget and timescale involving a process of random design modifications and environmental selection, optimised for survival and reproduction through hunting and gathering in a temperate Climate.

This experiment has been running for at least 540 million years.

You are walking around in the latest variation of a design that is millions of years old!

So why is this significant.?



•With the intelligent design process when we create a new technology we tend to throw away our old technology. VHS is replaced by DVD etc.

•Human evolution tends to build or add new systems on top of the old ones.

•Imagine a music system that employed analogue vinyl discs, digital compact discs and MP3 files together to reproduce recorded music.

•Thus the human brain consists of several different 'brains' of vastly different ages, levels of complexity and operating systems.

Composite Brain

- The brain of modern man is built on the brain of a primitive ape and that brain is built on the brain of a small fox like creature and that is built on the brain of a fish.



So how does this apply to gliding?

Experienced pilot climbing in a thermal
– pitch/roll control and thermal centering are automatic
– old brain.

Peripheral vision is used to see and avoid (predators)
other gliders- old brain.

Focused vision is used to spot next climb, thermal
source, active cloud and assess glide etc (predatory)
new brain.



Three layers of mind

- New Brain
- Old Brain
- Very Old Brain



New Brain



Conscious mind -

Analytic, rational, does both internal
and external communication,
Language based.

Old Brain



Preconscious mind-
memory store accessed at will by conscious mind

Skill Store-
sensor motor skills stored by repetition.
Don't think about it just do it!
When your body knows how to do some thing and you
don't have to think about it.

Unconscious mind –
Preserves the body,deals primarily in emotions and
feelings, organises and stores memories, establishes
associations. Can influence the conscious mind but
cannot be accessed by it.

Very Old Brain,



Deep level Unconscious mind programmed simply in terms of pain or pleasure, avoid painful experiences, repeat pleasurable experiences.



How This Impacts On Different Aspects Of Your Flying



Example 1.



An experienced solo pilot having had a lay off after witnessing a serious accident - Books a check flight with the expectation of flying solo later in the day. New brain

climbing into the glider he finds that the smell and feel of the cockpit makes him feel anxious and a little sick. Very old brain

Despite repeated attempts he is unable to achieve an adequate degree of speed control on launch and approach because in his old brain he really does not want to fly.

Example 2. The experienced XC pilot

It's a good XC day. She has done her research and established a plan for a declared 300 km task. New brain.

She rigs her glider and checks it, the feel and shape of the glider make her feel positive and secure. Very old brain

The rituals of preparation have triggered all the positive associations derived from a long and successful career in gliding. She feels calm and confident as she performs her pre-flight checks. Old brain

Shortly after the launch she senses the presence of a thermal, she turns the glider into the core of the thermal. This is all done automatically, without thought. She feels at home, like settling into a warm bath, as the glider climbs through 3000' on the way to cloud base, Old brain.

Because thermalling and glider handling have become an automatic skill for her, (old brain), she is able to focus her attention upon finding lift and navigation new brain

As she climbs toward base she scans the sky on track for active clouds and the ground for thermal triggers New brain



Example 2. The experienced XC pilot

New brain - flight planning

Very old brain - feel & shape

Old brain - rituals of preparation

Old brain - automatic actions

New brain - finding lift & navigation

New brain - scan the sky downwind for active clouds



**How many psychologists does it
take to change a light bulb?**



Only one if it really wants to change!

If you want to change your thinking and behaviour successfully the first thing that you have to recognise is that 'You' consist Of several different levels of mind which have to be communicated with using very different forms of communication if success is to be achieved.



Example: 'You' want to stop smoking.



Rational argument

Hypnotic Suggestion

Aversion therapy

(Google the above for an explanation)

Now let's look in more detail at how this relates to your flying



The role of the new brain in gliding

- Setting targets and goals
- Planning tactics
- Deciding what new skills to learn or existing skills to practice
- Deciding which tactic to execute, for example stay with the climb or glide to a better looking cloud.



The role of old brain in gliding

- Runs your body, flies the glider, centres in thermals.
- Needs repetition until skills are installed
- Needs clear and simple commands to follow,
- Responds best to messages in the form of pictures sounds and feelings rather than language.
- Deals with emotions, feelings and beliefs, these must all support your gliding goals.
- Cannot distinguish between negative and positive commands. It will strive to produce what you think about. Think about and picture what you want not what you don't want!



Take Control Of The Machine



Integrate the different levels of mind

- To maximise your chances of success you need to devise strategies which encourage all the levels of your mind to work towards your goal.



Pathway to Success

- Be very clear about what you want to achieve, (for the season and for every flight) (See – effective goal setting)
- Monitor progress very closely – note both why you did well and why you did badly. Try to be totally objective. (Analyse failures and successes!) (See - detailed progress analysis.)
- Be flexible, change your methods if they are not working
- Be positive, think positive and act positive. (self fulfilling prophesy)
- Be determined, take action when necessary to achieve your goals.
- Be single minded.



Effective Goal Setting - Bear in mind the way that the old brain works!

Define your goal in positive terms.

- State the goal simply.
- Specific, measurable and undeniable.
- Be specific about the time scale.
- To be fully motivated the goals must be your goals. Self-initiated and self- maintained.
- Clearly define the context .
- Set goals that are challenging yet achievable and realistic
- Your old brain will drive your body to achieve the goal you have set.



Detailed progress analysis, new brain

- List each aspect of gliding
- Rank your level of proficiency in each of those aspects.
- Work on your least proficient aspect until it becomes your most proficient, and then repeat the process continually so that you are always increasing your level of performance.



Visualisation & Mental Rehearsal

Mental rehearsal can be used to train the old brain to perform tasks effectively.

Try to rehearse all aspects of the experience, sound, vision and feelings.

By rehearsing you become more familiar with the task and therefore more comfortable and confident. You bring the old brain on board!



Self Talk

***"Nothing's either good or bad
but thinking makes it so."***



Many of us have Performance Limiting Beliefs

Beliefs about yourself and your ability

God is out to get me.

I'm not a lucky person.

I am not a real XC pilot

I don't deserve to win

I do not have what it takes

The other pilots are all much better than me

Beliefs about external factors

I never fly well in competitions

These conditions do not suit me

Conditions are not good enough for XC

Its not soarable

I'm not comfortable in gaggles

The soaring day has finished

Reforming your limiting beliefs

Counter Examples

Limiting beliefs are usually inaccurate or comforting generalisations. Find & rehearse examples of when you did do well, or when you were lucky.

Positive alternative interpretations

I never fly well in competitions – becomes – some aspects of competition flying hinder my performance but I will learn to deal with them.

These conditions do not suit me – becomes – This is a good opportunity to practice flying in these conditions.

Conditions are not good enough for XC – becomes – conditions are often better than they look.

Its not soarable – becomes - it may be soarable lets give it a try.

I'm not comfortable in gaggles – becomes – the gaggle can be your friend in difficult conditions or use the gaggle to your advantage

The soaring day has finished- becomes – the soaring day appears to have finished but keep looking you never know what you might find.



Dealing with stress/fear

The fight or flight syndrome (old brain)

(Google the above for an explanation)



Face your fears

Try to be objective about the things that scare or concern you.

What is the worst thing that could happen
And what would that actually be like?

Landing out?

Landing out in the mountains?

Gallwey & Kriegel - Inner Skiing



Clear your mental desk and focus on the main task

For the unconscious mind our survival is the overriding concern. If we do not convince it that we are safe it will distract our attention from whatever our main task is and we will under perform.

For example:

Gliding into a new area looking for lift.

Locate potential landing areas, **'file and forget'** and focus on the main task finding a thermal & working it.

Fight – Flight & Breathing

When under stress there is a tendency toward Hyperventilation, rapid shallow breathing. To relax try to slow your breath to 10 seconds in and 10 second out and breath into your stomach rather than your chest. This works before take off, when trying to climb in a rough thermal, or gliding low over apparently un-landable terrain.



Routines & Checklists

If **stress** is high rational **new brain** functions are impaired particularly if the primitive '**Fight or Flight**' **syndrome** kicks in – **old brain**.

We deal with this by establishing practised routines, **old brain**, for example for cable break, stall and spin procedures.

We also use learned Check lists such as CBSIFTCBE or UFSTAL. As well as ensuring that essential tasks are performed, they also focus and calm the mind.

Peripheral Vision

Connects with the old brain.

Focus on a particular point or object but then allow your awareness to spread out to take in the whole of your surroundings.

This has a calming effect before take off and can also be used when flying, particularly thermalling,



Dealing with stress/fear

How to cope with pre-task stress

Set up a conditioned response, (very old brain).

Re-live a time when you felt confident

Attach a stimulus, a phrase or a physical action,
for example clicking your fingers

Repeat several times.

Repeat the stimulus before launch,
you will feel confident.



Think like a Warrior: Use the Old Brain

Advantages of the Old Brain(unconscious):

It stores all your knowledge & experience.

It senses and stores all sensory inputs

It works in real time, almost instantaneous processing, little or no delay.



Disadvantages of the New Brain, (conscious mind):

Recall can be partial and is not instant.

Can only process a small number of sensory inputs. *Attention* is limited.

Recall and attention processes take time so New Brain processing takes up to one second, not real time.



The Old Brain is best

The New Brain is like your PC. The Old Brain is like a super computer.

In Gliding as in other sports, particularly hunting we must be fully immersed in our environment, alive to all sensory inputs. We need instant access to our knowledge and past experience.



How to access the Old Brain

Deep breathing, pressure breathing

Unfocused peripheral vision

Block the New Brain – chants, mantras or simply repeatedly counting to ten in your head.



A mantra that works for me

‘Fly the air not your thoughts about it or yourself.’

Our theories and models are only rough approximations of what the air may be doing. Use theory but don't be limited by it. Try to sense what the air is actually doing!

Try not to worry about your own well being or survival, use the ‘file and forget’ technique.

Go with the flow, Old brain

As you climb try to relax into the process, allow your glider to fly and just gently correct it when necessary. If you are fighting it you are doing it wrong – it knows how to fly. Allow your senses to flow out to your wing tips and beyond – visualize this, think in these terms.

By taking off you have allowed yourself to become part of a massive energy flow that is the atmosphere. **This energy flow or river of air has shape, form or grain and your job is to sense it and flow with it.**



References

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Any Further Questions ?

