

555 GOLF ACADEMY

'PERFORMANCE EXCELLENCE'

PROBLEM SOLVING BY CONCEPTS

'Basic Knowledge' and the forthcoming 'Golf Experience' is the root of all reliable improvement. 'Wisdom' flows from these sources.

We all experience 'Problems or Issues' with our 'Golf Game' and 'Golf Swings'. That is the reality! The challenge is to resolve each one as it arrives upon the scene and to do so methodically. If we are to solve 'Swing Problems' in an orderly predictable fashion, we must approach them in the very same way!

'INCH BY INCH, IT'S A CINCH!'

'STEP BY STEP RESOLUTION!'

If you can understand and learn the following **'Five 555 Concepts'**, as well as

'THE 555 MATCHING Components & Procedures Concept'

you will be well along the way to having mastered this ability to be your own personal 'Problem Solver'!

That is a really valuable and wonderful asset!

"Welcome Aboard!"
"Enjoy The Ride!"

THE 555 CONCEPTS

Below you are going to experience and learn about what your '555 TEAM' has come to call **'The 5 Concepts'**. (still more of those 5's)

These **'5 CONCEPTS'** are very innovative, amazingly applicable and freshly explanatory vehicles by which we have come to more easily express our feelings and knowledge of this most amazing 'GAME'.

The better you get to know **'IT'**, the worse its grasp on you gets!

There are manifold numbers of very nice and special human beings undertaking to 'Master Golf Basics', which is no haphazard task. It can be daunting, equally frustrating and very trying on ones patience and temper to attempt to get more friendly with this, at times, more than just 'Mechanics'. 'SHE' can be a very **'Nasty Mistress'**!

These **'5 CONCEPTS'** include ...

- 1) **'The HUMAN TETHER BALL POLE Concept'**
- 2) **'The HUMAN RATCHET or SOCKET SET Concept'**
- 3) **'The BALSA AIRPLANE Concept'**
- 4) **'The TARGET LEVER DEAD ROPE Concept'**
- 5) **'The GOLFING MACHINE Concept'**

However, the most important is left for last! That key or 'Corner Stone' to better understanding 'The Great Game Of Golf' is indeed **'The GOLFING MACHINE CONCEPT'**.

Your '555 TEAM' helps you get as much out of these good friends and faithful servants as we do virtually every day!

"Welcome Aboard!"
"Enjoy The Ride!"

THE HUMAN TETHER BALL POLE CONCEPT

'This Is A Very Useful And Appropriate Golf Concept'

The 'Human Tether Ball Pole is about 'Rotational Stability'. It is about 'Lower Body Machine' performance in a 'Round & Round Nature' that produces all the 'Horizontal Motion Of The Body and Clubhead'. Stability is important since the 'Hands, Arms and Golf Club' orbit around the 'Body Core or Engine' which, if it is not stable, produces unreliable **'Clubhead PATH and PLANE'**. Variables are problematic! Any of this unreliability proves troublesome when we are attempting to create 'IMPACT & SEPARATION' between the very small 'Sweet Spot of the Clubhead and the Butt Of The Little White Ball'. It is a 3/16ths of an inch endeavour.

We all know the school yard game where there is a pole stuck firmly into the ground with a rope and ball attached to the top, whereby we could strike and sling the ball around and around the pole until the rope became tight through its winding up around the pole. While we worked diligently to do this winding, another competitor, standing on the opposite side, would strive to strike the ball and make it stop and then go in the opposite direction in order to accomplish the same 'Winding Up' but in that different direction. The first to get the 'Tether Ball To Come Tight and Strike The Pole' would win the game.

'The Golfing Body Machine Is Very Much Like This Tether Ball Pole'. It has a top and a bottom, as well as 'Two Ropes and Balls' attached to the top. No need being simple! We have to have been created complicated. Well the 'Physics and Motion' of two 'Balls and Ropes' is quite manageable. We call them 'Lever Assemblies'. They include the 'Target Lever Assembly' ('Target Side Shoulder Socket, Upper Arm, Elbow, Forearm, Wrist, Hand ('Primary Lever') and the actual 'Golf Club' ('Secondary Lever'). The other side is called the 'Brace Lever Assembly'. It is on the 'Push Side Of The Machine'.

'This Pole Must Be Stable To Support and Enable Steady Orbiting Of The Ball At The End Of The Tight Rope'. When the ball goes 'Round & Round' and 'Centrifugal Force' is applied, the rope stays tight and optimally far from the pole. When all things are consistent and steady, the ball 'Orbits On A Consistent PLANE' or height above the ground. To maintain this height, we must keep adding 'Energy' to the speeding 'Tether Ball' so it maintains adequate 'Kinetic Energy' to stay powerfully at the end of the extended and elevated rope. When we stop applying energy, the ball soon slows and drops towards the ground due to 'Gravity'. When this 'Energy' dissipates completely, the ball will come to a stop directly towards the ground.

'The Top Of The Tether Ball Pole Is Our GOLFING HEAD'. 'The Bottom Is Our Feet and Legs'. While and in order to keep the 'Tether Ball In Stable Orbit', we must be and remain very 'Top & Bottom Stable'. If we waiver, so too will the 'Tether Ball' waiver. It will fall 'Out Of Steady Orbit' and become erratic. When swinging the 'Golf Club At The End Of Extended Arms and Hands' ('Dead Rope'), our 'Body' must be stable. When we are unstable, the 'Clubhead' ('Tether Ball') will get 'Out Of Orbit' and,

in its 'Strayness', will not be able to strike the 'Golf Ball Squarely' due to 'Clubface AIM' and 'Clubhead PATH' degradation.

When you 'SET-UP' as your '555 TEAM' suggests, you might use the 'Down, Up & Down Method'. That means your 'Hands' are pushed 'Down', your 'Abdomen and Chest' pushed 'UP' and then your 'Butt Seated Slightly Down' to 'Load Your Quads & Glutes'. This produces reliable 'Lines and Angles' that are very statically and dynamically stable. This is really quite essential if you want to strike consistently 'A To B Golf Balls' 'Dead Stick'!

'The Captain EYES Stabilize The Top'. 'Loading The Quads & Glutes Stabilizes The Bottom'. Get these 'Components' right during your 'SET-UP Phase'. Keep them correctly in place and functioning during the entire 'Back and Front Swings'. If you do not, you will not fully enjoy the resulting 'Ball Flight'.

When you are 'SET-IP' in this efficient and reliable manner, you will 'Feel Very Quiet' in your 'Lower Body Machine' while being slightly more active in the 'Upper Body Machine'.

Remember, you should 'Feel Like Your Hands and Arms Swing Around Your Resistive Hips, Legs and Feet'. You will 'Feel Like Your Lever Assemblies Are Much More Active Than The Base'.

Your 'Tether Ball Pole' will be steady while the 'Rope & Ball' is moving around that 'Vertical Core'. We call that our 'Golf Body Core' or our 'Spinal Crankshaft'.

Appropriate, don't you think?

THE Balsa AIRPLANE CONCEPT

We know that our **'Golfing Body Machines'** ('Lower Body Machine' 'LBM' and 'Upper Body Machine' 'UBM') accomplish specific tasks that, when blended in balance and holding onto a 'Golf Club', produce satisfying and predictable results with a 'Ball & Stick'.

We also know that the **'Body Loads and Releases Energy'** for this purpose of 'Striking The Ball With The Stick'. (see 'ALSDR') This process is accomplished by a combining of 'Soft Tissues And Hard Boney or Skeletal Material Making Up The Machine'. With simple **'Muscular Contraction and Relaxation'** ('Tetanus & Tonus') applied in straight lines, via skeletal mechanics, we can 'Do Work'. Bones are related or connected by or at 'Joints' whereby they are able to utilize 'Leverage and Radius' to produce 'Mechanical Advantage'. This amplifies our ability to produce even more 'Work'. So we are a indeed a form of 'Human Body Machine'!

'Stored or Potential Energy' must be created somewhere and somehow. Only after it is created might we be able to transform the 'Static-Passive' into 'Dynamic-Active' ('Kinetic Energy') so that we can 'Do Work' in the form of 'Striking The Ball' accurate distances to precise targets.

How do we 'Store and Release Energy'?

Muscles 'Stretch and Relax' or 'Flex and Reflex' ('Flexor Extensor'). When they are stretched they are 'In Tension' or are 'Loaded' as a 'Bow String' might be loaded and ready. When they are flaccid they are 'Un-Loaded' and relaxed.

This known, let us now proceed to our **'Balsa Airplane Concept'**.

We all know of and have likely owned one of these wonderful little toys in our childhood? If so you know what we are about to explain. If you do not know, you will soon realize how this little device relates to our 'Golf Swing'. Perhaps a **'Ford Has A Better Idea Turning A Brain Light-On Moment'** coming at us?

This 'Balsa Airplane' has 'Components' for the purpose of accomplishing 'Procedures' as we do! At one end of the 'Body' there is a 'Tail Assembly' that produces direction and stability. At the other end, the 'Business End', we find the 'Propeller'. This is where the 'Visible Work Is Done'! Between the two ends, we find a 'Rubber Band' that, via the 'Body', directly connects the stable tail to the 'Propeller'.

We 'Wind Up The Working End' by holding onto the 'Tail Assembly' with one hand ('Resistance') while we turn or rotate the 'Tip Of The Propeller' in the correct direction ('Loading'). This 'Correct Direction' depends on the 'Pitch Of The Propeller'. It 'Pushes or Pulls Air' depending on the direction of its turning.

When we have 'Loaded' the 'Rubber Band Engine' and the 'Body Axis Of The Balsa Airplane' is properly 'Aligned', the 'Potential Energy' will 'Release' via the 'Propeller' down the 'Body Axis Line'. Thus, our 'SET-UP' is also critical when playing with our little 'Flying Toy' as it is with our 'Golf Swing'!

Relate this information or mental picture to the '**Tether Ball Pole Concept**', which you all know so well. They are inextricably intertwined! The 'Tip Of The Propeller' is very similar to the 'Ball At The End Of The Dead Tether Ball Rope'.

Let us relate this 'Balsa Airplane' directly to our own 'Golf Body Machines'.

Our 'Feet' are the stable 'Resistive' 'Tail Assembly' against which the 'Winding Rubber Band Coils or Twists' ('Loads').

Our 'Lower Body Machine' ('Knees, Thighs, Hips, Trunk Abdomen, Thorax or Chest and Shoulders') is the 'Rubber Band'. We can 'Rotate. Coil and Wind or Twist' these 'Components' into a state of 'Loading or Storing Potential Energy' that will be ready to 'Do Work' at our discretion or 'Release' ('Voluntary and Autonomic').

Our 'Hands, Wrists and Arms' and the actual 'Golf Club' are the 'Propeller'. (see 'Lever Assemblies')

How do we release the 'Balsa Airplane Stored Energy'? We simply 'Release or Let the Tip Of The Propeller Go'! And little or no more! Remember this when you 'Release' your bodies 'Stored Energy' to swing the 'DOFT Clubhead Through The Butt Of The Patiently Waiting Ball'. We do NOT force the 'Work' but more '**Let IT Go**' and do its own thing 'Down Out Forward & Through' (see 'DOFT').

Let this 'Balsa Airplane' help you to grow in your 'Golf Knowledge'

"Welcome Aboard!"

"Enjoy The Ride!"

THE GOLF SOCKET SET CONCEPT

'THE HUMAN RATCHET'

While we are considering this 'Golf Socket Set Concept' as it relates to our 'Golf Swing', we must always remember our **'Tether Ball Pole'** and that little **'Balsa Airplane'**.

We all know about and have likely owned an automotive mechanic's 'Socket Set'. If not, go to Sears or any tool outlet and ask to see and play with one. You would be well served to buy a 'Socket Set'. Sooner or later you will surely put it to good use. One can tighten or loosen a nut on a bolt with a **'Crescent Wrench'** ('Adjustable Spanner') but the 'Socket Set' usually gives this rotary process a whole new easier meaning and function.

In this 'Socket Set' one buys three 'Component Ranges'. They are **1)One 'Ratchet Handle'** ('Constants'), **2)Two or Three 'Extensions'** ('Variables') and **3)The 'Sockets'** which enable our working with various sizes and varieties of 'Nuts & Bolts' ('Variables').

The purpose of this 'Socket Set' is to accomplish very simple 'Mechanical Feats' ... the 'Turning Of Nuts and Bolt Heads In Either Direction'. The one way tightens while the other loosens! The one way turns the head on while the other turns it off. (see 'Constants & Variables')

Our 'Golfing Body Machines' are like this mechanical 'Socket Set'.

We have but one 'Body Ratchet Handle' ('Constant') that has but one task ... turning or rotating in one of two directions ... 'Coiling Un-Coiling, Winding Un-Winding, Loading Un-Loading, Turning Brace and Re-Turning Target'. This 'Ratchet Handle', in human terms, is our 'Lower Body Machine' ('LBM'), which creates exclusively all the 'Horizontal Round & Round Motion'. We vary the 'Direction Of Travel' to satisfy our need to 'Do Work'.

The 'Extensions' are the **'Length Of Our Club Shaft'**. We vary the length of the 'Extension or Connecting Device' to satisfy our task. ('Variables') ('Clubhead Speed & Distance')

The 'Socket Heads' are the **'Clubheads'**. We vary these 'Components' as well to accomplish our specific needs. ('Variables') ('Trajectory & Distance')

THE TARGET LEVER DEAD ROPE CONCEPT

We know about the **'5 SET-UPS'** ('Posture, Grip, Stance, Ball Location and Alignment'), as well as the king-pin disciplines we know as those **'5 ESSENTIAL ELEMENTS'**. ('Clubface AIM, Clubhead PATH, Clubhead Speed, Sweet Spot and Angle Of Attack') Never leave home without any of these! There is no golf swing anywhere on the world, right-handed or left-handed, male or female, that does not have all ten of these aspects or elements ... NOT ONE! Best you 'Get A Grip' on them!

We know about the **'Golfing Machine'** and its very functional and meaningful 'Lower and Upper Body Machines' ('LBM' & 'UBM').

The 'UBM' contains the **'Lever Assemblies'** composed of the 'Target Lever Assembly', whose 'Primary Lever' is the actual 'Human Hand, Elbow and Arm' while the 'Secondary Lever' is the actual 'Golf Club' or weapon. Then there is that 'Brace Lever Assembly', which functions on the 'Brace or Push Power Side' of the 'Machine'.

The 'Target Side' contains all the 'Target Components' while, quite naturally, the 'Brace Side' contains all the 'Brace Components'. You recognize this about your 'Tether Ball Pole'.

THE 'DEAD ROPE' Concept:

This is, indeed, another name for the **'Target Lever'**. This 'Lever Assembly' has three tasks: 1) The 'Target Hand Controls The AIMED Clubface', 2) The 'Target Lever Establishes and Maintains The Swing Radius', 3) The 'Target Lever Assembly Provides The #4 Pressure Point'. ('Lateral Rotational Chest To Target Biceps Pressure'). Your '555 TEAM' calls this 'Assembly of Parts or Components' the 'Dead Rope'. You do not want to apply any 'Tension' to it during the entire 'Swinging Motion' as 'Tension Will Shorten The Dead Rope'. **"WHY?"**

Because, one of its primary raw functions is that of simply connecting the 'Target Hand' ('Clamp') to the 'Target Shoulder Socket'. When we know the 'Length Of The Inanimate Rope', we then know the precise **'Distance From That Shoulder Socket'** to the 'Sole Of The Golf Clubhead'.

This is important as we must 'SET-UP' with the 'Leading Edge' at the 'South Pole Of The Little White Ball', make our 'Dynamic Proper Moves' and thus get precisely back to that 'Butt Of The Ball' (see Ballistic Point). To do so repeatedly, reliably, we must maintain the same 'Dead Rope Length' at all times or, minimally, get back to that **'Initial SET-UP Swing Radius'** at the 'Moment Of IMPACT & SEPARATION'. If not, we get 'FAT, THIN, HEEL and TOE' rather than a 'Pure Strike'.

We should 'FEEL' like we **'Throw The Clubhead Down To The Ball'**.

So, now you know **'The Rest Of The Story'!**

GRATITUDE & ACKNOWLEDGEMENT

A great many golfers have been touched directly and indirectly by **'Mr. HOMER KELLEY and his wife Salley'** through their dedication and effort in the area of defining the 'GOLF Stroke' for what it is. Homer's book, **'THE GOLFING MACHINE'** is without question a world authority on what makes the 'Golfing Swing' happen in its multitude of ways by an infinite number of players and hackers alike. Whatever method of making the 'Clubhead Go' and the 'Ball Go Away' each one of us employs, Homer has its real movements and discipline (or lack of the same) defined. If we have the patience or curiosity to understand what Homer writes, to ask questions of those provenly knowledgeable in his works, we will selfishly improve with some permanence. Knowledge is the Key to a 'Peaceful Coexistence' with the 'Game of Golf'.

I thank Homer for a great deal of my knowledge and want to make it quite clear, contrary to some current belief, that Homer never ever told anyone **'How They MUST SWING A GOLF CLUB'**. Homer did NOT produce or promote a 'Swing Model'. He defined the reality of **'How We DO SWING THE CLUB'** and gives us the ability to discern if our method is effective and true to science through defined 'Components and Procedures'.

Homer never professed the slightest **'MY WAY'** model but could, beyond the ability of any one else I know of, give teachers and students, players and hackers, reasons and methods for defining and understanding their own and the 'Golf Swing' of others. Homer gives us the ability, the knowledge base, to define good and bad and to develop 'Routines and Methods' to repeat 'Swing Patterns'.

To fully comprehend Homer's overall message may take some time, in fact, you may never do so. The effort and dedication is more than might be expected from the casual golfer, but the opportunity is there for the taking. To get some benefit from Homer's work, simply by persisting to read it, is inescapable. You will glean little flashes of truth constantly from his knowledge.

Every student I have had for years, and will ever have, shall, knowingly or otherwise, benefit from my having known Homer Kelley. The depth of his knowledge and understanding is uncanny.

THANK YOU HOMER

his 'Little Yellow Book'...
'THE GOLFING MACHINE' is available from the 555 Golf Academy.

AS YOU MIGHT HAVE GATHERED

As you might have gathered, I liken this 'Teaching and Learning Golf' to my flying experiences and career. It is a gift or blessing to be able to earn a living being involved in ones passions.

In this flying metaphor, once I have increases my airspeed to V1 and attain Vr (rotation speed where the flying surfaces have sufficient lift and control to handle the weight and depart), reaching V2 ('Flight Safety Speed') I then increase pulling or back-pressure on the stick or flight control to cause the elevator to raise the nose up and increase the airship's 'Angle Of Attack' ('AOA'), a term that also applies to 'Golf'. This rotation causes the rumbling nose gear to come off the runway surface soon followed by the main gear's becoming 'Un-Weighted' ('Un-Stick') and also leaving the runway. **'We Are Then Committed To Flight'!** We have crossed the 'Go - NO GO Threshold'!

Once I rotate, the cockpit procedures, rules, forbid me the option of aborting the take-off except in rare circumstances. 'We Are Airborne' and to come back to the gate from which we just 'pushed back', to return to this airport, I would have to now 'go around' and either stay in the 'pattern' or re-enter it with the tower's knowledge and assistance. But the captain is absolutely in control of the actions and decisions on board.

Very much like 'Golf' I think. The teacher can monitor and give advice or even instructions, but he is not directly 'on board your ship'. It is you who must take the actions and make the moves that accomplish the various and specific tasks. Once we gain some certain momentum in our learning, we shall assuredly leave the ground and fly from the nest.

The real trick is to get better and enjoy 'IT' more!

And you shall.

You are this far already!

Now to the pivotal 'THE GOLFING MACHINE CONCEPT'

THE THREE PART GOLFING MACHINE

A Major Concept

We know that Golf is just **'COMPRESSION & LINE OF COMPRESSION'** accomplished with **'COMPONENTS & PROCEDURES'**, that are 'Pre-Selected or Spontaneous' (but 'Pre Shot Routine Organized'), so we had better always keep looking at Golf as **'Parts And What To Do With Them'**. Breaking down what appears at first glance appears to be and has the reputation of being 'Highly Complex and Complicated' is our most direct path to its being tamed. Golf certainly needs to be brought about to heel or at least lassoed so we might get the beast into the corral. Once we get a grip on its true nature, 'What A Ride!'

Now we had better figure out which end holds the bit; where the saddle goes and how and which ends kick and bite! We can do that!

1) Our **'GOLFING MACHINE'** has only 'Three Parts'.
('From The Ground Up' and 'From The Inside Out')

1) the **'LOWER BODY MACHINE'** ('LBM')

This aspect is comprised of 'Body Parts or Components' located in the 'Lower Body Machine' (LBM) which are structurally supported by the **'AXIAL SKELETON'** which is the central or spinal bones; the long and short body bones. The 'LBM' contains the 'Feet, Ankles, Lower Legs, Knees, Thighs, Hips, Spine, Shoulders, Neck and Head'; perhaps the 'Biggest Bone of the Lot'! It's what's inside that counts. Were they talking about the head or the heart?

IMPORTANT:

In the **'AXIAL SKELETON'**, the 'Musculature' attached to the 'Skeletal Framework' in the 'LBM' stays 'CLOSE' to the 'Spinal Crankshaft'. We want to be 'Compact and Centred'. We want the 'Spinal Axis' to be **'Stable'** because, if it is not, controlling the 'Speeding Clubhead', keeping it **'In ORBIT and On PLANE'**, getting it back to the Ball, $\pm 3/16^{\text{th}}$ of an inch, will be next to impossible unless we 'Get Lucky' in our 'Manipulations'. **'Crap Shoot Golf'!**

The 'Two Key Elements' (factors) in creating and maintaining this 'Stability' is keeping your **'Tallish CHIN'** in its properly 'Set-Up' position and your **'Properly Set Brace Knee'** (Base of PIVOT) in its respective functional position as well. The 'Top and the

Base of the PIVOT' must be as stable as the 'Rock Of Gibraltar' or your 'Ball Flight' will look like a kite in the breeze; floating and leaking from 'A' to who knows where!

2) the **'UPPER BODY MACHINE'** ('UBM')

This aspect is likewise comprised of 'Body Parts or Components' structurally supported by the **'RADIAL SKELETON'** which contains the **'Shoulder Sockets, Upper Arms, Elbows, Forearms, Wrists and Hands'**. The 'Upper Body Machine' (UBM) is also referred to as the 'Primary (Target) Lever Assembly and the Brace Lever Assembly'. The Golf Club (Secondary Lever) is included in this array but right now it is not flesh and blood so we are aware but not concerned.

IMPORTANT:

As in the 'LBM' above, in this **'RADIAL SKELETON'**, **'Stability or Repeatability of Motions'** is forever a key element. We want to, as well, keep especially the 'Brace Lever Elbow' relatively 'CLOSE' to our 'LBM and the Axial Skeleton' so the parts do not get 'Flying Around' and 'Flailing About'. It is a 'Secondary Absolute' that we establish and maintain very effective **'Brace Lever Extension'**; in other words that effective 'Bend & Straighten Drill FEELING and Function' through the 'IMPACT Zone' with every 'Stroke Procedure' from Putting to Driving. During the Swing we need to 'Feel that our Hands are 'Pushed Out', away from our Body by the Brace Hand. That is the 'Deep, Flat and Wide' discipline to which I so often refer.

The only 'Soft Exception' to this rule might be found in the 'Stage One Stroke Procedure'; that is the 'Putting and Chipping Procedure' where we might 'Set The Wrist Triangles' and the 'Elbow/Forearm Segment of the Levers' in other than the relatively 'Extended Condition'. In this 'Stage One Procedure' the 'Primary Lever Assembly' (Shoulder Socket to Fingers) does not have to be 'the Long Dead Rope' or a 'Straight Leg of the Upper Body Triangle'. You have some latitude in this 'Component Selection' **but once the Triangles are 'Selected' they does NOT change shape**. As I state in the 'Putting' Chapter, "there may be 'Seven Basic GRIP Styles' but in Putting there are 'Seventy Seven'!

3) the **'HEAD MACHINE'** ('THM')

(This is the part above the Shoulders)
It's the Brain Centre and using it well has a direct influence on the quality of our performance.

This is the ‘Boney Box’ with the ‘Grey Matter’ that requires so much attention. We are ‘Tilling the Thinking Soil’ every minute we spend together in this book. You are the direct benefactor even if you do not learn or retain as much as you would like. The Brain requires exercise, even in the sometimes meaningless form. Like the Body, just running around in circles is not all pointless. Just look at the track events in the Olympics! You can buy good ‘Tools’ and then must exercise the soft and hard tissue equipment that the Good Lord endowed upon you. Whether you like it or not, it’s yours for the duration!

I often visualize myself with the physique of Thomas Bjorn, Appleby, Allenby, Tiger Woods, Paine Stewart, Gary Player, Hale Irwin, Ben Crenshaw, Ernie Els, Bernard Langer, Reteif Goosen, Adam Scott, Greg Norman, and others who take care of their ‘Machinery’. We are charged with the responsibility for doing so. We get out what we put in! Don’t be lazy! There is but one shepherd of our own bodies and it isn’t Mom or Dad or even a trainer!

Once we have the general ‘Parts’, ‘LBM & UBM’, properly ‘SET-UP’, the ‘**5 CONTROLS**’ in place, we can shift from the ‘Training Mentality’ to the ‘Trusting Mentality’ and get on with the version of Golf I call ‘REFLEX BALL-PIN GOLF’. This is ‘ALIGNMENT GOLF’ at its very best’. It is where we strive to follow good ‘Procedures and ROUTINES’ so that, when the moment arrives, we can just ‘Let IT Happen’ and not find ourselves forcing the Motions. The ‘Make IT Happen’ form of Golf is never overly successful short or long term. Avoid it with a passion or like the plague. Your choice!

IMPORTANT:

Thought I should at least place the word ‘Important’ here as I did in the two ‘Machine Segments’ above. I am not going to put one more item in it. If I get started, we’ll be here for the balance of the millennium and that’s simply too long for this busy ‘Country Boy’! I have lesson warmed up and waiting!

2) **OPTIMAL TRUSTING SEQUENCE:**

3) The ‘**HEAD MACHINE**’ must have earned the right to say
“I Can Do IT”.

2) The ‘**UPPER BODY MACHINE**’ must understand and have earned the right to say,

“I Won’t Do IT” or “I Don’t Have To Do IT”.

‘The UPPER BODY MACHINE LEADS The TRAILING LOWER BODY MACHINE In The BACK SWING’ which is the ‘COILING, LOADING or WINDING UP’ portion of the overall ‘Golf Swing’. The ‘Brace Hand’ winds up the Shoulders which Load the Trunk, Hips, Upper and Lower Legs right down to your Feet; ‘Winding From The Top Down’. (see ‘Lead & Lag’)

Then in the reverse portion, ‘Front Swing’, where the ‘Potential ENERGY’ is being converted to ‘Kinetic ENERGY’ and gets delivered to the Ball, **‘The UPPER BODY MACHINE LAGS BEHIND The LEADING LOWER BODY MACHINE In The FRONT SWING’**. The ‘Wound-Up Golf Torso UNWINDS ‘From The Ground Up’ (‘AXIAL’) (Pressurized Brace Toe, Pre-Loaded Brace Foot and Brace Leg Drive to Clubhead) and from the ‘Inside Out’ (‘RADIAL’ - Spinal Column out to the Clubface. It is a bit of Action – Reaction. This I called ‘Axially Generated Radial Movements’ like Motion travelling or slinging from the ‘Hub of a Bicycle Wheel out through the spokes and rim ultimately to the road surface of the tire. You must understand this!

- 1) The **‘LOWER BODY MACHINE’** must understand and have earned the right to say,

“I Am Going To Do IT”.

The **‘Lower Body Machine’ ‘LEADS the LAGGING Upper Body Machine’**. The ‘Pre-LOADED BRACE FOOT’ **‘PUSHES EARLY’** and provides the POWER from the ‘Resistive Brace Leg’ which **‘ROTATES or PIVOTS’** the Hips which soon take the ‘Turned and Coiled Shoulders’ along for the ride! The Primary and Secondary Lever Assemblies, those Arms and Hands holding onto the Golf Club, again are simply ‘Pulled Along’ or are ‘Trailing the Trailing Shoulders’! Your Hands **‘MONITOR’** velocity and **‘RPM’** and will soon **‘CATCH UP’** to the **‘LEADING LOWER BODY MACHINE’** as their speed/acceleration capability is significant and very useful, if properly administered. Relatively ‘Passive Hands’ do the best Golf Work! Keep them ‘Soft’.

The ‘Coiling-Uncoiling Golf Swing’ **‘WINDS UP from the Brace Hand, Brace Elbow and Brace Shoulder Down to the FEET and UNWINDS from the Ground Up’**. Just as you might suspect?

The ‘Coiled Golf Body Machine’, ‘Brace Knee to Brace Shoulder’, ‘Un-WINDS or Un-COILS from the Brace Toe, Brace Foot and Brace Leg Drive; GROUND UP’. The Shoulders, and everything connected to them, moves after, ‘Trailing the Brace Side Lower Body Machine’.

It, 'the Golfing Machine', DOES NOT 'Fire from the Shoulders Down'; that is unless you want to **'CAST'** a Golf Club like a fisherman! (although I need to tell you that the long-distance underhanded serf bait caster very much resembles the best golfer)

There is a rather unique analogy that I think applies here. What one might 'FEEL' is that one is trying, during the 'Front Swing', to 'PUSH and move the World (the Resistive Big Green Ball on which we stand) backwards or away from the 'Target PIN'. In doing so, or trying to do so, the Body is Propelled forward by the Brace TOE, FOOT and LEG. In this 'Pushing MOTION or FORCE' (Connected) something has to give. The 'Big Green Ball' is too big to yield, so the Clubhead moves forward THROUGH the 'Little White Ball' taking it for a ride 'Down the Target Line' into the Hole or to the PIN.

**'DO NOT HIT AT THE BALL
but
SWING the Clubhead Down And THROUGH the BALL.'**

**PROPER COORDINATION Of The 'LBM & UBM'
PRODUCES PROPER 'ON PLANE MOTION'**

A couple of quick points that you may find worthwhile in conjunction with the above advice; **'Hitting At The Ball' Increases TENSION while 'Swinging Through The Ball' Decreases TENSION**. Tight muscles are 'Slow Muscles'. Relaxed muscles are 'Faster Muscles'. **'Hitting At The Ball' Decreases Clubhead Speed while 'Swinging Through The Ball' Increases Clubhead Speed**. This is a fundamental difference between 'AT Action' and 'THROUGH Action'. Remember we should best 'Swing the Clubhead' all the way to and through the Target and simply let the Ball get in the way.

**'IMPACT IS INCIDENTAL
TO THE SWINGING MOTION'.**

This attitude of just creating the 'Swing Arc' and not trying to 'Hit The Ball' will enable you to make your 'Real Swings' 'Soft Away and Smooth Through' just like your 'Practice Swings' which takes care of the old conundrum of wasting all your great swings during the practice sessions and in your actual, 'Just before Stepping Up to the Plate Warm-Up Swings'. They all come from within the same bloke, you know!

Remember, if you are 'Tight In Your Lungs' (High Pulmonary Pressure) you will not be able to accomplish either 'PIVOT Release or Clubhead Release'. The disadvantage will show up in your 'Ball Flight and on your Score Card'.

How simple is this picture? Please keep it simple.

By the way, talking about '**COMPONENTS & PROCEDURES**', you may find it of interest to know there are 206 bones in the human body (some better put together than others I might add) which support or carry a considerable number of muscles, paired or single. I spent a few moments trying to research 'How Many Muscles' but cannot readily do so. I know of some 65 pairs and singles but there are more! Perhaps you might let me know.

Some 'Machine' this 'Golfing Body'! And you own one too!

Likely 'Clear Title' although you might "Owe Your Soul To The Company Store" (Ernie Ford) or those '**Privately-Owned**' institutions we know as the 'Federal Reserve' and the 'Internal Revenue Service'.

Can't resist the opportunity!

CLUBHEAD PATH AND SWING PLANE

The Two Axis Graph

UP & DOWN and ROUND & ROUND

Upper Body Machine & Lower Body Machine

We now all know that the ‘Human Golfing Machine’ is comprised of three distinct ‘Parts or Aspects’. **1) ‘The Lower Body Machine’** (‘LBM’), **2) ‘The Upper Body Machine’** (‘UBM’) and **3) ‘The Head Machine’** (‘THM’). When properly combined, these three join in making ‘Golf Music’ that gives us endless pleasure. Or can beat us to near death! It all depends on how much we work at understanding and earning the right to make successful ‘Golf Shots’.

There is no magic! We must just logically manage the challenge the old fashioned way ... “We Must Earn ‘IT’!”

We all know as well about **‘Clubhead PATH’** and its ability to be one of three conditions. These are **1) ‘Inside Out’**, **2) ‘Square To Square To Square’** (‘Parallel’) and **3) ‘Outside In’**.

We also know about **‘Clubhead PLANE’** or **‘Swing PLANE’**. There are also three conditions in this aspect. When ‘Swinging The Clubhead On Its Inclined Plane’, one can be either **1) ‘Below Plane’**, **2) ‘On Plane’** or **3) ‘Above Plane’**.

SWING PLANE:

Let us deal with this ‘Swing Plane’ for a moment and see if we can make any sense of this, sometimes rather nebulous term.

‘The Tether Ball Swings Around The Pole’. When the ‘Axis or Pole’ is plumb, the ‘Ball and Rope’ will naturally and uniformly swing around the ‘Pole’ at almost right angles to the ‘Axis’ if the ‘Rotational Velocity’ is high enough to produce adequate ‘Centrifugal Force’ to get the ‘Ball & Rope’ on a ‘Swing Plane’ that is ‘Perpendicular To The Pole’.

This simple ‘Physics’ should make at least reasonable sense.

Keeping this in mind, remember that the ‘LBM’ produces all the ‘Horizontal Motion’ or all the ‘Round & Round’. The ‘UBM’ produces all the ‘Vertical Motion’ or all the ‘UP & Down’. When we have these two distinct **‘Planar Motions’** operational and mixed, we

will end up an **'Average Motion'** somewhere between 'Round & Round' and 'Up & Down'. This is appropriately called the **'Resultant Plane'**.

This is about 'Swinging The Golf Club Around A Forward Inclined Axis With Some Aft-Tilt' which sets up the average of this 'Round & Round' and 'Up & Down' enabling us to get the 'Squarely AIMED Clubhead Away From And Speedily Back To The Butt Of The Ball' in a predictable manner.

THE TWO AXIS GRAPH:

We all know and understand the basic **'Two Axis Graph'**, right. If you consider the 'Motion Formula' 'Distance Equals Rate/Speed Times Time' or ' $D = RT$ ', you can portray this information graphically. Let us place the 'Speed Information' on the 'X or Vertical Axis' and the 'Time Information' on the 'Y or Horizontal Axis'. Now we can show on a piece of paper what happens if we drive at 30 miles per hour for 4 hours. Take a look at the ' $D = RT$ ' graph below.

(see Illustration)
 $D = RT$ Graph

LIFT vs. ROTATION:

Now, let us shift gears to the topic of the 'Golf Swing Plane'. Interestingly, the 'Clubhead' (along with other related and connected parts) is what swings on 'Plane', which produces the 'PATH'. Let us just stick to the consideration of 'Plane' for now.

Picture yourself or even 'SET-UP' at 'Address Ready or IMPACT FIX' with your 'Clubhead Soled' on the ground or floor. Place your 'Target Foot & Shoulder' against the wall. Your 'Hips & Shoulders' are 'Perpendicular To The Wall'.

Consider the 'Two Axis Graph' again for a moment. You are now standing in a real life size version of the graph! The 'X Axis' is the floor. The 'Y Axis' is the wall.

If you 'Swing The Clubhead' dead flat or horizontal, ('Zeroing Out All Lift'), the 'Round & Round' will keep the 'Clubhead Soled' or in contact with the floor. This is the 'Horizontal Plane'.

If you 'Swing The Clubhead' straight up vertically, in front of your chest, (Zeroing Out All 'Rotation') your 'Hands & Arms And The Clubhead' will swing nominally 'Up The Wall'. The 'Clubhead PATH' will follow 'Up & Down The Wall'. This is the 'Vertical Plane'.

When we smoothly 'MIX' these two 'Planar Motions', we produce what again is called the 'Resultant Planar Motion'. This is the actual 'Golf Swing Plane'.

You can now visualize and understand that, if there are any 'Conditional Changes in the Spinal Axis' ('Tether Ball Pole') during the 'Planar Swinging Motion', the 'Orbit Of The Clubhead' or 'Tether Ball' will be directly affected. Just out of interest, there is a slight 'Lead & Lag Factor' in the affect. The 'Orbital Oscillation' occurs just a moment after the axis change.

This is a very good example of the skill your '555 TEAM' calls '**Isolating The Parts**'. If we can 'Feel and Understand The Parts', we can understand the 'Whole' as well!

ISOLATING THE PARTS:

The 'LBM' goes 'Round & Round' (R&R) ... '**Horizontal Exclusivity**'

The 'UBM' goes 'Up & Down' (U&D)... '**Vertical Exclusivity**'

If we perform these two distinct functions simultaneously and at the same 'Rate Of Movement' ('Pace or Speed'), we will move the 'Clubhead' on a 'Line or Plane' that is 45 degrees to the floor and 45 degrees to the wall. In other words, the 'Resultant Swing Line' is 'Half Way Between the Floor and the Wall'. This is the 'Swing Plane' you produce with perfectly timed and blended or 'Matched Motions'.

(see Illustration)
Lift vs. Rotation and Plane

ONE MOVE BACK & UP:

The optimal 'Post SET-UP Motion' in the above 'Take-Away Hand Path', which produces the 'Resultant Swing Plane', is **'One Move Back & Up'** from the 'Address Ready' or IMPACT FIX Position' right to the 'Top Of Back Swing' ('TOB').

If you were to make the 'Back & Up Swing' as Jim Furyk does, with an **'Outside, Up & Back, Inside Out Loop'**, you are making two or three independent yet sequential moves. You will 'Feel' these various **'Isolate The Parts'** moves as soon as you are aware of them. Awareness is the purpose of the 'Isolate The Parts Exercises'. When we understand the existence of certain reality, we can optimize or even change elements ('Components') at will. You may yet become a 'Golfing Machine'!

TARGET LEVER BREAK DOWN:

Remember, the 'Back & Up Swing' is a **'Brace Handed and Brace Sided Motion'**. Anyone who prefers to make it the wrong way, with the 'Target Side', can suffer the ills of that 'Mechanical Error'. If the **'Target Lever Break Down'** or that **'Reverse Pivot & Reverse C'** are known to you and disliked, if you are suffering from a chronic case of the 'FAT THINS' and 'Pushes and Pulls', you might reconsider taking the 'Golf Club' away from your 'SET-UP Position' with your 'Brace Hand' and a very 'Soft Target Hand' and that 'Dead Rope Target Lever'. This will lead you directly to better 'Clubface Control, more reliable Swing Radius and a predictably effective #4 Pressure Point'. These 'Impact, Pivot and Plane or Delivery Components' (see 'ALSDR' and '5 Essential Elements') are central to your 'Linksy Happiness'.

Just knowing about them is the very real 'First Step'!

ON, ABOVE AND BELOW PLANE:

Now, further, let us 'Pre-Select' that we shall 'Swing The Clubhead On This 45 Degree Resultant Plane'. It is our task or objective!

If we perfectly 'Blend or Match The Horizontal and Vertical Motions' we shall follow the 45 degree Swing Plane'. This is referred to as 'Being On Plane'.

If we 'Rotate' the 'Clubhead Faster R&R or Horizontally' than it is 'Lifted Vertically', we will 'Swing It Below The Resultant Swing Plane' or closer to the floor. This is called **'Being or Swinging Below Plane'**.

The flip side is true as well.

If we 'Lift' the 'Clubhead Faster U&D or Vertically' than it is 'Rotated Horizontally', we will 'Swing It Above The Resultant Swing Plane' or more up the wall. This is called **'Being or Swinging Above Plane'**.

You will hear your '555 TEAM' speaking about 'Matching Components & Procedures'. This is an example of its applicability. When we have 'Balanced Lift and Rotation', balanced 'Upper Body Machine' and 'Lower Body Machine' 'MOTIONS', we then move the 'Clubhead' on a 'Pre-Selected PATH & PLANE' that, in turn, naturally produces 'Pre-Selected Results'. This enables us to be predictable and to play 'Reliable and Repeatable Golf'.

We can thus learn 'Remembered Feel' and perhaps, one day, become that very special 'Reflex Golfer' we aspire to become.

We all know how cool that would be!

I hope these few moments spent together on the topic of 'PATH & PLANE' has helped you to better grasp and understand **'The Logic and the Mechanics Of The Golf Swing'**.

Remember, the science of this 'Swing' is all about **'The Physics Of Rotation'** and **'The Geometry Of The Circle'**.

Thanks again you for your time!

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24/7