

THE GOLF MYTH COLLECTION

BOOK C VOLUME 1

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BOOK C
Volume #1

The
'555 GOLF ACADEMY'

'Where Passion Meets Performance'

and
where you can achieve

'PERFORMANCE EXCELLENCE'

with help from
the '555 TEAM'

ABOUT BEING

Q1)

You cannot talk about being 'Alive'
without talking about being 'Dead'.

In Golf,

You cannot talk about 'Winning'
without talking and knowing about 'Losing'.

Everything in perspective!

Take the good when the 'Good Lord' provides the opportunity. Then
thank 'God' for keeping the 'Losing' in balance!

Be 'Grateful and Reverent' !

Isn't Golf a whole lot like 'Life'?

GLOSSARY OF TERMS

Our instructors tell every student, "If during this session I use any word or language that you do not clearly understand, stop me immediately and ask for clarification. Otherwise I might as well be conducting this relationship in Chinese with hand signals." The same is true about this book.

Incidentally, we have repeatedly given very productive golf lessons to foreigners who speak very little English. Golf's 'Universal Motions' are so 'Newtonian Basic' that they transcend the geographical language boundaries. We can help a student create or 'Reproduce The Motions And Feel Its Results' most effectively.

This extensive 'Glossary Of Terms' does NOT replace your 'INDEX', but compliments it so use both liberally! In this manner your 'Native Tongue' becomes more meaningful and a far better tool. When we master English, we can learn and grow at will.

GLOSSARY of TERMS AND DEFINITIONS: (not rules related - very general information)

OTHER

\$2.00 Nassau: n. A betting strategy for golfers.

2 D's: Distance & Direction or 'Range and Azimuth'. All Golf Shots clearly involve both of these two physical elements as well as Trajectory or the height aspect.

3 B's: BRACE HAND, BRACE SHOULDER, BRACE FOOT denoting the primary 'Brace or Power Side' parts and Actions or sequence of events in the Back and Front Swings.

3 F's: Find FEEL Fast; If you have momentarily lost your touch and ability to make good shots, you need to do some Tick Tocks and find your Feel Fast.

3 R's: Reliable Repeatable ROUTINE.

3 C's: Confident Comfortable Consistent. Unless you are Confident and Comfortable, you will never become Consistent.

3 Basic Hand Positions (putting): 1) Inside the Line, 2) On the Line and 3) Outside the Line which creates a similar Clubhead PATH.

3 Levers (Upper Body Machine): n. The 'Target Lever Assembly' is comprised of the 'Target Shoulder Socket', the 'Arm and Hand and the Golf Club'. The 'Secondary Lever' is the actual Golf Club. The 'Brace Lever Assembly' is comprised of the 'Brace Shoulder Socket, the Arm and the Hand'.

3 Lever, Single ACTION: n. The Brace Lever Assembly is comprised of 'Three Articulating Joints' that are 'POWER Accumulators'. They are the Shoulder which 'Cocks and Un-Cocks or Raises and Lowers or Flexes and Extends'. When it is raised it stores Potential ENERGY which is released or converted to Kinetic ENERGY when the Assembly is lowered. The Brace Elbow is also another 'Articulating Joint' that stores (when Bent) and releases ENERGY when it is straightened or straightening. The third Lever is the Wrist which is certainly a POWER Accumulator when it is Cocked and Arched or Bowed. The Wrist operates on three different Axes; Vertical (Cock, Level, Un-Cocked), Horizontal (Bend, Flat, Bowed or Arched) and the Longitudinal Axis (Turn, Vertical, Rolled). These are the 'Three Articulating Levers' (Components) whose MOTIONS take place in one smooth ACTION or Procedure. One Motion Up, 'Storing ENERGY' (Brace Hand to Brace Shoulder) and One Motion Down, 'Releasing Stored ENERGY' (Brace Hand back to Bottom Of Swing Arc). So the 'Single ACTION' is One smooth MOTION Up and One smooth MOTION Down.

3 o'clock: the position when the Clubhead and Clubshaft is 'Horizontal or Level' to the ground in the Front Swing. This term is used as a 'Position Reference Point'.

4 Balance Points: n. These four 'Balance Points' occur while the 'Golf Body Machine' ROTATES or PIVOTS to the Brace Side and back through IMPACT Zone to the Target Side and FOLLOW-FINISH. Balance

Point #1 occurs at Address (Swing Sequence #1); #2 at Top Of Back Swing (TOB Swing Sequence #5); #3 At and Through the IMPACT Zone (Swing Sequence #7) and finally #4 which occurs in the FOLLOW-FINISH (Swing Sequence #8, #9 and #10). In essence, one must be 'Balanced At All Times'.

4 Pivot Points: n. These four 'Pivot Points' occur rather at the central and extreme ends of the full Back and Front Swings. They are 1)Address, 2)Back Swing, 3)IMPACT and 4)Front Swing.

4 Posts: n. These are similar to the 'Four Balance Points' and are 1)Address Post, 2)Brace post, 3)IMPACT Post and 4)Target Post. Notice that they are quite simply the central and 'distal' or extreme ends of the 'Golfing Machine' or 'Range Of Motion'.

4 Key Elements: n. The 'Mental Preparation', the 'Pre-Shot ROUTINE' including 'SET-UP', the 'EXECUTION' and the 'Post-Shot ROUTINE' which includes 'Evaluation'.

4 P's: Push Pinch Pulmonary Pin. In order to make sound repeatable Golf Shots, you require to have Leg Drive (PUSH), Brace Lever or Arm Extensor Action (PINCH) as well as you need to be 'Breathing Out' through the IMPACT Zone and even better, during the entire Swinging MOTION, both Back and Front Swings.

4 Perspectives In Reading the Green (the 'Walk Around' High ENERGY Side first): 1) Down-The-Line (DTL) from five paces behind the Ball, 2) Across-The-Line from five paces displaced from the Target Line on the 'Low Side', 3) Up-The-Line from five paces on the far side of the Cup back to the Ball, and 4) walking back to the Ball on the 'High Side' counting your paces to determine the Distance until you get back to the Ball where you take one final look D.T.L. from a couple of paces (you can plumb bob). Immediately but not hurriedly, move into your Pre-Shot ROUTINE, take one last look D.T.L. and back up the 'Centre of the Ball Rolling Road Centre Line and take the stroke, 'Pull the Trigger'.

555 GOLF: n. The '5 SET-UPS', the '5 EXECUTIONS' and the '5 CONTROLS' .

5 SET-UPS: n. 'POSTURE, GRIP, STANCE, BALL LOCATION and ALIGNMENT'

5 EXECUTIONS: n. 'SWINGING MOTION, HANDS, EYES, BALL, PIN'

5 CONTROLS: n. 'CHIN, HANDS, FEET, BALL, PIN'

5 Golfing Machine Axes: n. The Body has at all times '% Axes' that reference 'Motion' whether at Address Ready or, in Motion, at IMPACT or any other point in the Entire Swinging Motion. They are 1)Feet or Ankles, 2)Knees, 3)Hips, 4)Shoulders and 5)Eyes and ears. These closely relate to the 'Golf Body Machine Planes'.

5 Foot Circle: n. The zone or area on the green from which the professional golfers like and strive to make their putts.

6 Body Pressure Points: n. 1)The EYES Focused, 2)The Tallish CHIN (Hip Pressure Pushing Up to the Sternum to create Clearance), 3)The 'Brace Toe Pressure', The 'Brace Foot Pre-Load', The 'Brace Leg Drive' producing 'PIVOT Pressure', 4)The 'Brace and Target HAND Pressure Points' of which there are four 5)The 'PINCH Pressure' (of the Extending Brace ELBOW and Three Lever, Single Action), 6)The 'PULMONARY Pressure' (BREATHING Out)

7 Golfing Machine Planes: n. When we are 'In Motion' (circularly, Body Rotation, with the Levers attached) the reference 'Planes' are 1)Clubhead, 2)Clubshaft, 3)Brace Hand, 4)Brace Forearm, 5)Brace Elbow, 6)Brace Shoulder and the 7)Eyes and ears Plane.

7:30 o'clock: n. the position when the Clubhead and Clubshaft are half way between 'Vertical to the Ground' (6 o'clock) and 'Horizontal to the Ground' (9 o'clock) in both the Back and Front Swings This term is used as a 'Swing Position Reference Point'.

8 Point Pre-Flight & Take-Off: n. 1)Mental Imagery, 2)Evaluation of Situation, 3)Visualize, 4)Pre-Select COMPONENTS (SET-UP Body and Equipment), 5)Pre-Select PROCEDURES (Actions), 6)Pre-Shot ROUTINE, 7)PIVOT Waggle and 8)EXECUTION, There may be an Item #9 added as your 'DeBrief or Post Shot/Flight Evaluation of Results'.

8 o'clock: n. the position when the Clubhead and Clubshaft are just below 'Horizontal' to the ground in the Back and Front Swings. This term is used as a 'Swing Position Reference Point'.

'84 Drill' (8 o'clock to 4 o'clock): n. A term defining the 'Clocking' in the Back Swing where the Target Hand travels to the 8 o'clock position while it travels to the 4 o'clock position in the Front Swing.

9 o'clock: the position when the Clubhead and Clubshaft are 'Horizontal or Level' to the ground in the Back and Front Swings.

This term is used as a 'Swing Position Reference Point'.

'93 Drill' (9 o'clock to 3 o'clock): n. A term used to define the height of the Back and Front Swings relative to the 'Clock' as a model. (see Clocking)

10 BASICS: n. The '5 SET-UPS' and the '5 EXECUTIONS'

10 Foot Circle: n. The zone or area on the green that is designated as a good shot and place from which to make you r putts.

10 - 6 Cadence: n. The 'Beat' by which good balanced Golf Swings is accomplished. More units of time required in the Back Swing than in the Front Swing. There is acceleration in the Front Swing. Therefore the Clubhead Back Swing Travel Time is more than the Front Swing Travel Time over the same Clubhead Distance.

19th Hole: n. The slang term used for the bar or lounge in the clubhouse, which is often the next stop after completing the round.

45 Day Rule: n. When one buys new equipment (compulsively or otherwise), there is a relative 45 Day 'Cooling Off Period' where you either make it work or it joins the other 'Warehouse Items'.

45 Day Love Affair: n. same as the '45 Day Rule'.

60 Inches of White Cord: n. A Drill used to improve your 'Putting Technique and Procedures' where you place a 60" piece of white cord centered across the aft edge of the Cup and strive to get your Ball Rolling PATH inside the ends of the cord, i.e. within 30" of the centre of the hole or PIN.

75% POWER: n. Making you Swing with reduced 'TENSION' at less than maximized 'Horsepower or Effort'. It is a 'FEEL' smooth function much as a $\frac{3}{4}$ Swing might be exercised. Practise regularly striking your driver about three quarter distance. If you can make 'Golf Balls Go Away' 250 yards, try them at 200 yards being very smooth.

90 Degree Rule: n. A golf cart rule whereby one may not drive onto the fairway from the cart path other than at 90 degrees to the cart path directly to the ball. This rule is most often implemented to protect a wet course from vehicular damage.

150 Acre Table: n. The regulation PAR 72 Golf Course is a 'Billiards Table' about 150 acres in area.

A

Acceleration: n. The increasing or positive change in velocity of the hands, arms and Clubhead (Lever Assembly) from the 'T.O.B.' or beginning of the downswing 'Segment #1 & #2 through IMPACT' to the point of 'Release' and deceleration or 'Segment #3'. Also the speeding motion of the Hands created by 'Pressure Points' resisting the natural tendency towards deceleration.

Ace: n. A shot played from the teeing ground ending up in the hole in one stroke. Also called a 'Hole-In-One'.

Address: n. The position taken by a player in preparation for playing a shot. The process of taking a Stance over the ball and grounding one's club. This definition is of some importance while 'Putting In The Wind' in that, after you have taken your 'Stance', if the wind blows the Ball off it's lie, moves it in any way, you are assessed a penalty. It's in the Rules!

Address FIX: n. This 'Address Position' is any position from which a Golfer may elect to start the backswing or 'Stroke'. It is a composite of all the 'Stroke Pattern Components'. Very simply defined the '**5 SET-UPS**' are '**Posture, Grip, Stance, Ball Location and Alignment**' without which we cannot proceed or succeed.

Accumulators: n. As in the 'Accumulation of Potential ENERGY in the Golf Swing when it is at the 'Top Of Backswing' (T.O.B.) not unlike a 'Wound-Up Spring or Stretched Rubber Band'. There are 'Four POWER Accumulators', being, 1) the 'Cocked or Bent Brace which involves the Shoulder, Elbow and Wrist' which 'Release in Extensor ACTIONS', 2) the 'Cocked Target Wrist', 3) the 'Turned and Bowed or Arched Target Wrist' which controls the angle between the Shaft and the Forearm, and 4) the 'Angle between the Target Shoulder and Target Arm'. These all 'Store and then in a timely fashion Deliver Potential ENERGY' through the Golf Clubhead to the Ball.

Advice: n. Counsel given to a player relating to the 'Game of Golf', which would or could affect how a shot is played or what club is used. This includes asking a playing partner or competitor what club he is using or has just used! This is an infraction of the Rules of Golf.

Address Ready: n. Term for the process of getting ready, of

establishing 'Component Alignments and Procedures' that are required to accomplish the desired 'Ball Response'.

Aft-Tilt: n. The function if 'Leaning The 'Tether Ball Pole' or 'Human Spinal Crankshaft' to the 'Brace Side' ('Away From The Target') in order to facilitate properly 'Swinging On Plane' while having your 'Weight And Power Inside & Behind The Ball'.

Aggregate: adj. Describing a stroke or score made over two or more rounds of golf, or by two players playing as partners. They may account an 'Aggregate Score'.

Aiming: g. The process of Aligning or Aiming the Clubface and the Swing or 'Clubhead Path to the Target or Target Line'. This is primarily a process of 'Component Alignment'. 'Clubface AIM' is the 'Number One ALIGNMENT In The Game Of Golf' and deserves priority.

Aiming Line: n. See 'Target Line'.

Aiming Point: n. Scientifically, the point at which 'Thrust' is directed. In Golf, it is the adjustment of Ball Location to offset the mechanical characteristics of a specific club such as the shaft length. From a non-mechanical perspective, an aiming point could be considered as your Target.

Air Shot: n, A stroke that misses the ball entirely. Also called an 'Air Ball or Whiff'.

Albatross: n. Named after the sea-going bird, as with the eagle and birdie, this term refers to a 'Hole Score' of three under par. It can only, therefore, be scored on a Par 4 or Par 5. Some people have come to call such a performance a 'Double Eagle' but this is an impure term.

Alignment: n. The process of setting or placing body and club components in the proper position to the Target or Target Line for the purpose of executing a specific requirement or procedure. The arrangement of the 'Feet, Knees, Hips, Shoulders, Ears and Clubface' in relation to the 'Target Line'. Process used to aim shots in a particular direction.

All Square: adj. Even or tied in match play.

Alternate-Shot: n. A variation of the game in which two partners take turns playing strokes until the ball is 'Holed'. This format

is used in Ryder Cup.

Angle of Attack (Approach): n. The Clubhead Path or Angle at which the Clubhead approaches the Ball in the forward swing. Sometimes called the 'Angle of Approach'. This is the 'Descent Angle' as one might have on the 'Glide Slope' of a precision instrument approach in an aircraft.

Angular Motion: n. In Golf, the 'Clubhead RPM' and 'Slinging Effect' as differentiated from simple 'MPH or Clubhead Speed'.

Approach: n. A shot played to the putting green, usually relatively short in length.

Approach Shot: n. Your first attempt at hitting your ball on to a green on a Par 4 or Par 5. One can also call the second shot an 'Approach Shot' as well.

Apron: n. The narrow area of grass surrounding a putting green, cut shorter than the fairway but not as short as the actual putting surface. Also called the 'Fringe'.

Arc: n. The portion of a curved line as in a circle. In golf it is the route of the Clubhead during the swing, hence the term 'Swing Arc'.

As It Lies: adv. phrase. Position at which ball comes to rest.

Attack: v. To play a hole or course aggressively.

Attend: v. To remove and hold the flagstick as a partner or opponent puts from a distance. Also called 'Tending'. Caddies do this task for their employer, paid or not!

Auchterlonie, Willie: N. British Open champion in 1893

Automatics: n. An extra Nassau bet that goes into effect whenever a player is a set number of holes or points behind an opponent.

Away: adj. Describing the relative location of one ball to another, and thus one player's position to another, but based on the Ball Location on the course. In the case of two players and two balls, the ball farther from the hole is called 'Away'. This player strikes the next ball first unless 'local rules' stipulate otherwise. In 'Ready Golf' this is not necessarily the case.

Axis: n. An imaginary straight line through the centre of the body of the person and the ball around which it should rotate during the swing and through flight if there is 'Rotation' of Hips and Shoulders or 'Spin' imparted flight.

Axis Tilt: n. To change the 'Plane of the Shoulder Turn' without moving the Head, the golfer must tilt the 'Shoulder Axis' by moving the Hips. Not unlike the helicopter pilot, to change direction, alters the plane of the rotating blades by tilting their axis in or towards the new desired direction.

B

B.O.S.A. n. Abbreviation for the term 'Bottom Of Swing Arc' which is the lowest point in the Clubhead Path in an executed golf swing. As in pendulum which comes to rest at the 'B.O.S'.

Backdoor: n. Colloquial term for a putt which rims the hole before dropping in from the far side.

Back Nine: n. The final nine holes of an eighteen hole golf course. Also referred to as the 'Back Side'. (most appropriate if one has made an 'ass' out of oneself on the front or outgoing nine).

Backspin: n. Rotation in clockwise direction about the 'Y Axis' (Horizontal Axis) imparted on the Ball by the Clubface. Spin against the direction of travel or Ball Flight Line. Put another way, it is the non-forward-rolling rotation of the Golf Ball produced by striking it below the 'Equatorial or Horizontal Centreline'.

Backswing: n. The initial part of the 'Golf Swing', when the Club, Hands, Arms and Body move away from the ball and rotate back, up and over the head. When the Hands reach above the head, it is called a 'Full Swing'.

Back Tees: n. The teeing ground located the farthest distance from the hole, usually used by better players or dreamers. Also called the 'Championship Tees'.

Baffie - Baffy: n. A sturdy hickory-shafted golf club which replaced the 'Baffing Spoon' and had a lofted face for high shots from the fairway. It was similar to our modern day III, IV or V Wood. This variation or latitude comes with the fact that during the time of these Tools being popular, the tolerances and club specifications were very wide and subjective. If golfers had a 'Set of Woods', this was the most-lofted of the set. It was thought or is suspected that some 'Spoons' could have been the loft-equivalent of today's VII Woods which would utilize a loft range from 24 degrees to even 30 degrees. Today's V Wood should be about 20 degrees and the VII would, therefore be, 25 degrees, employing what we call a '5 Degree Odd Club Split'. Even this criteria is very flexible, allowing what is called the 'Strong V' being 19 degrees or one degree more or closer to vertical face to the horizontal. You can see, this latitude in specifications soon is tempted to utilize a '4 Degree Odd Club Split'. Where does this lead? Very little consistency in Lofting, but with every Wood Number's being a two degree increase or decrease from the previous number. i.e. Driver (I) 11 degrees, II Wood 13 degrees, III Wood 15 degrees, IV Wood 17 degrees, V Wood 19-20 Degrees. Once reaching this V Wood 'Plateau' the splits generally increased to 3 degrees producing the VI Wood 23 degrees, VII Wood 26 degrees, VIII Wood 29 degrees, the IX Wood 32 degrees and so on. There are readily available today metal woods up to and including the XV Wood. As these higher numbered woods evolve the 'Splits' increase slightly to 3 and 4 degrees, similar to the iron heads and the selection is quite up to the sole discretion of the manufacturer. Variety is certainly the Spice of Golf!

Bag Drop: n. When you arrive at the golf course, you may leave your bag and clubs at a designated area that is very close to the cart area and usually attended by a service staff. This saves your having to carry your equipment from your automobile to the cart area. Some clubs have staff to carry your equipment from the parking lot to the staging area for you.

Bailing Out: v. As in 'Quitting' and 'Coming off the Ball', usually caused by looking away from the 'Butt or Bottom Inside Cheek' of the ball before it has 'Separated from the Clubface'.

Bail-Out: v. To deliberately play away from a hazard or other trouble. The noun or adjective form refers to a shot played in this manner.

Balance: n. State in which all opposing forces cancel eachother

out. From a Golf perspective, 'Holding the Centre of Gravity' of the body 'Inside The Stance' without moving the Head, which is the primary control point. Proper 'Distribution Of Weight' from the 'Address to the Finish'.

Balata: n. A material from which the cover of a golf ball can be made. It is a rubber-like substance. Pure 'Balata' is now rarely used in the manufacture of golf balls. 'Balata' is supposed to produce a 'Softer Feel' with better ball action of the Clubface. Synthetic materials have now replaced 'Balata'.

Balance Points: n. Refers to the weight distribution of a shaft or an assembled Golf Club. To achieve a given 'Swing Weight', a low balance point shaft requires less head-weight than a mid or high balance point shaft. Because of this head weight requirement, the shaft with the lowest balance point will not necessarily produce the lowest balance point in the assembled club.

Balance Points: n. The 'Four Balance Points' in the process of a persons making a 'Complete Golf Swing', involving 'Coil to the Brace Side' (Back Swing) and 'Un-Coil back through the IMPACT Zone all the way to the 'Top Of The Front Swing or completion'. These four 'Balance Points' of the Swing are; 1)Address, 2)Top Of Back Swing, 3)IMPACT and 4)Top Of Front Swing or 'Follow-Finish'.

Bald adj. Describing the putting surface when it has been cut very short, seemingly scalped 'bald'.

Balfour, Leslie: N. Winner of the 1895 British Amateur at St, Andrews, where, six years earlier, he had been the 'brides-maid' in the same event.

Ball, John: N. Born in 1862 and dying in 1940, this outstanding amateur won the British Open in 1890 as well as the British Amateur eight times between 1888 and 1912.

Ball, Tom: N. British Open runner-up in 1908 and 1909.

Ball at Rest: n. A situation in which the ball is not moving and is not being influenced by the actions of the player, such as 'Cleaning', 'Taking a Drop', 'Pick and Place', 'Improving One's Lie' (legally or otherwise), etc.

Ball Deemed to have Moved: n. A ball that has left its position of 'rest' and comes to 'rest' in another place by any means. It should

be known that the wind may move your Ball. In some situations, this is deemed to be a penalty.

Ball Flight Laws: n. The physical relationships between 'Clubhead Path and Angle' that influence the 'Golf Ball's Flight', identical for every golfer and for every swing. 'Newtonian Natural Motion Laws' are key examples.

Ball in Play: n. A ball that has been struck by a player and stays within the bounds of the course. It stays in play until 'Holed' or 'Replaced' by another ball in accordance with the Rules of Golf.

Ball Marker: n. Any small object, such as a dime or the standard snap button found on all golf gloves, used to place just behind the ball on line with the Target Line in order to show the player where his ball was after it has been 'Picked & Cleaned'. Marking is for the purpose of 'Placing' the ball precisely back from whence it came.

Balloon: n. or v. A shot that 'Balloons' is one that rises sharply into the air with a 'Steep Angle Of Attack'. This 'Ball Flight Shape' can be caused by either 'Mother Nature's Elements' such as a strong head wind or can be caused by the striker who creates a 'Throw Away Action' which increases the 'Net Effective Loft' to a considerable degree. This result is called a 'Balloon Ball'.

Banana Ball: n. A shot that curves enormously or radically from left to right (RH) or right to left (LH) and which is generally called an aggravated Slice. Its 'Ugly First Cousin' is the 'SNAP HOOK'. Neither is generally very welcome!

Bank Shot: n. A shot played from close to the green or putting surface with a steep bank in front of the player (left, right or behind the green), so that the ball may hit the face or slope of the bank and be beneficially deflected towards the target. Not unlike tactics used in the game of billiards or pool.

Barranca: n. A typically rocky or heavily wooded deep ravine, sometimes classified or played as a hazard.

Baseball Grip: n. A grip characterized by having all ten fingers placed on the golf club handle. Thus also called the 'Ten Finger Grip'. This is Golf's 'Benchmark Grip'.

Beach: n. Colloquial name for any sand hazard. v. To land in a

sand hazard.

Behind the Ball: n. The body position at 'Address or SET-UP' and during the Swing in which the players Head and general Body are to the 'Brace or Aft Side' of the centreline of the Ball and an imaginary line drawn through the Ball at 90 degrees to the 'Target Line'.

Birdie: n. Term used to describe a one hole score of 'One Under Par'. If Par were four, you would have taken three strokes to hole your ball.

Bisque: n. In match play, a handicap stroke that may be taken on any hole chosen by the player who is receiving its benefit.

Bite: v. Action of the under-spinning golf ball's turning against the Line of Flight of the ball and 'biting' the turf on contact which causes the ball to stop quite abruptly or even back up.

Beach: n. Colloquial term for any sand hazard.

Bend: v. To cause Ball Flight or a shot to bend or curve using sidespin (X Axis) or under-spin (Y Axis) which would be imparted at Impact by the Clubface's specific behaviour.

Bend Point: n. or 'Flex Point' refers to the point on the shaft at which maximum bending occurs under a specific swinging load or torque. This point is generally in what is known as the 'A Flex Zone' which is in the lower half or the tip of the shaft. In general, the lower the flex point, the greater the 'Feel' and the greater will be the actual shaft or bending moment. Lower flex points are generally softer in flex or produce lower 'Frequency Modulation'. The higher the bend point the stiffer the shaft which tends to reduce the 'Feel' or 'Sensitivity' of the shaft.

Bent Grass: n. A durable, resilient grass with very fine blades able to withstand harsh temperatures and so used often in northern cooler climate courses.

Bermuda Grass: n. A coarse grass that can withstand oppressive heat and thus used in southern warmer climate courses.

Better Ball: n. Two players on the same side, each playing their own ball with the lower score counting at each hole.

Best Ball (Better Ball): n. A match in which your lowest single score of a foursome on each hole counts as the score for the entire team on that hole. Called 'Better Ball' when applied to a team consisting of two players.

Birdie: n. A score of one under Par on a single hole.

Bird's Nest: n. A lie in which the ball is deeply cupped in grass.

Bisque: n. In match play, a 'Handicap Stroke' that may be taken at any hole chosen by the player who is receiving or benefiting by it. If you are the recipient, you may take it to improve a bogie result to a Par and 'Bank It' until needed.

Bite: n. The '*Backspin*' applied to a '*Ball at Impact*' that causes it to stop dead on the green or spin back towards the player who struck it. v. To land a ball on the green with '*Backspin*'.

Blade: n. The hitting part of an iron clubhead, not including the hosel. Also a type of putter (heel-mounted) or specific design of iron head that is not 'perimeter-weighted and cavity-backed'. v. The process or action of striking the ball thin (leading edge of Clubface making contact at the equator of the ball) or even topped (above the equator) resulting in a low flying shot that tend to travel farther than desired in the approach game and shorter than desired in the '*Full-Swing*'. Also colloquially called '*Skulled*'.

Bladed Shot: n. Often referred to as a '*Skulled Shot*', this '*Impact Error*' occurs when the '*Leading Edge Of The Clubface*' strikes the '*Aft Side Of The Ball*' either '*Above the Equator (THIN)*' or worse still, on the '*Top Of The Ball*' like on the top of ones head. Hence the name '*SKULL*'. The result of this '*Impact Error*' is '*No Loft*' as the actual '*Clubface*' is taken out of the equation since the ball is struck not by the face by the '*Leading Edge*'. There is not '*Loft*' to the '*Leading Edge*', hence the reaction is that of a very high speed '*Putter*' or very '*Hot Running Shot*'. Very bad '*Ball Flight Profile*' especially to a green from a short distance. The ball will likely go well over the green and into trouble.

Blast: v. To play a forceful shot from a sand bunker or out of the deep rough, hitting behind the ball and displacing a large amount of sand or grass which carries the ball away. Also called an '*Explosion Shot*'.

Blind: adj. A shot-target hidden from the player by a large hill,

tree or any other obstruction. A blind shot is one in which the player cannot see the Target.

Block: v. To prevent or delay 'Rotation of the Hands, Wrists, Arms and Body with Club' during the swing, resulting in a shot that starts and remains to the 'Low-Energy Side of the Target Line'.

Bluegrass: n. A cool-weather grass with moderate-size blades that can thrive in a variety of climates. Most commonly found in Kentucky or that region of the United States.

Bobbing: g. The act of raising or lowering ones 'Centre Of Gravity' (COG) and thus ones 'Head or Chin'. This is usually caused by altering the 'Spine Angle or Spinal Inclination' or altering the 'Knee Flex' and leads to inconsistent 'Impact or Ball Striking'.

Body Coil: n. The full 'Load Turn' away from the Ball in the backswing made by the 'Hips and Shoulders', the 'Lower and Upper Body Machines', which is the 'Primary Source of Power in the Golf Swing'.

Bogie - Bogey: n. Term used to describe a one hole score of 'One Over Par'. If Par were three, you would have taken four strokes to hole your ball.

Bold: adj. Refers to a shot played too strongly and going past the intended target. Also, a bravely-played shot, such as one to a well-guarded pin position (close to hazard, challenging or adverse ground).

Boring: adj. Refers to a low shot that holds its course through the wind.

Borrow: n. The amount of compensation taken on a green required to putt across a slope enabling the ball to come into the hole.

Bounce: n. 'TOOL' Term describing the profile or shape of the sole or bottom surface of a clubhead, the portion that comes in contact with the ground. When there is 'Bounce' to a sole, the aft or trailing edge or portion of the sole is lower or thicker than is the 'Leading Edge'. If you were to consider a narrow wedge glued to the underside of a pane of glass, the surface affixed to the glass would be parallel to the glass, while the other long surface of the wedge triangle would below that level or surface because it is thicker. The aft segment of a sand wedge sole with 'Bounce' will

hang or extend below the 'Leading Edge'.

Bounce (Clubhead): n. is the intentional design condition of the sole of an iron head, measured in degrees, in which the 'Trailing Edge or Tail' of the sole is below or lower than the 'Leading Edge'. This characteristic is generally utilized in sand wedges or higher lofted wedges. As a rule, the greater the 'Bounce Angle' the more the club can cut through tall grass or sand while resisting digging too deeply into the ground material. Thus, wedges with lots of bounce are desirable for the sand and heavy or buried lies. Irons with less bounce are more effective for hard surfaces. They create a shallower Ball Flight with more run and less divot.

Bowed: adj. A condition of the 'Wrist Hinge' whereby the hand is bent inwards or to the inside of the forearm. The opposite condition is called 'Bent'. The neutral condition is referred to as 'Flat'.

Brace Lever Assembly: n. The 'Brace Hand, Wrist, Forearm, Elbow, Upper Arm and Shoulder Scocket' make up the 'Brace Lever Assembly'. Its task is to 'Connect The Golf Club' to the 'Primary Golf Engine' as well as to 'Bend & Straighten' which 'Stores & Delivers Power'. It also stabilizes the 'Target Lever Assembly'.

Brace Lever Extensor Action ('BLEA'): n. This 'Motion' is the function of 'Bending & Straightening' of the 'Brace Lever' for the purpose of producing 'Mechanical Advantage' and 'Power' in the form of 'Clubhead Speed'.

Brassie: n. A wooden club with a brass sole plate and a bit more loft than a driver. Considered equal to the modern II Wood or perhaps stretched to include the III Wood.

Break: v. The cocking of one's wrists (primarily the 'Target Wrist') during the Backswing. The curved line on which the ball travels while rolling on the green due to 'Slope' and 'Grain'. Also called 'Borrow'.

Broad Focused: n. The ability to gather information on the 'Big Picture' before making a shot. The considering of wind conditions, lie, slope, hazards, trees location, moisture content and other relevant information concerning the shot and Ball Behaviour. Also known as 'Course Management'.

Bump and Run: n. A shot around the green intended to hit into a

bank or slope and then release and roll forward towards or into the hole. Can be used on flat surfaces as well.

Bunker: n. Term for a sand trap. Originating from places where sheep would burrow into sand dunes for shelter against the elements.

Bunt: v. To hit an intentional short shot.

Buried Lie: n. When part or all of a ball lies below the surface of soft turf, sand or other loose material.

Burn: n. Scottish term for water such as in a small creek or ditch which is in play, inside the boundary of the hole, on the course.

Buzzard: n. Colloquial term for a score of two strokes over Par on a hole, also known as a 'Double Bogie'.

Braid, James: N. (1870-1950) The first golfer to win the British Open five times between 1901 and 1910, he was one of the founders of the British P.G.A.

Brassie n. Term for a modern II or III Wood.

Bump & Run: n. a short punch shot or Push Basic Stroke that generally does not get very high, does not travel very far in the air, lands softly and runs along the ground, usually onto the putting surface. It is an approach shot.

Buried Lie: n. When part or all of a ball lies below the surface of soft turf or sand.

Buzzard: n. A score of two strokes over Par on a hole. Also known as a 'Double Bogey'.

Bye: n. A supplementary game after the main match is over, i.e. If one player beats another by four holes with three still to play, the bye is played over the remaining holes, usually for a modest side stake. In a double knockout tournament, a player may progress to the next round without playing a match due to simply lack of contestants. This is called a bye.

C

Caddie: n. A person who carries a golfer's equipment during a round, giving advice and otherwise assisting the player as required.

Cadence: n. The 'Rhythm' or delicate sequence by which components are blended into a whole such as in music. We know and 'Feel' the marching beat and the very symmetrical 4:4 time or 'Beat' of the waltz. In 'Golf', although there is symmetry and balance, from an overall 'Rhythm' point of view, the Back Swing does NOT equal the Front Swing. They are NOT equal in 'Timing or Duration'. If the Golf Swing requires '16 Units Of Time', there are NOT 8 in the Back Swing and 8 in the Front Swing. The 'Cadence' is more of a '10:6' since the Back Swing is 'Low-Energy', without acceleration, while the Front Swing experiences very high acceleration in the lower half and is 'High Energy'. The 'Golf Swing' is a '1 and Thru' 'Cadence' and not a '1-2' event.

Calamity Jane: n. The name Bobby Jones gave to his favourite wooden-shafted putter.

Calcutta: n. An auction in which people bid on players or teams in a tournament.

Cambered Sole: n. A rounding or radiusing of the sole of the Clubhead. This shape reduces drag when the 'Clubhead Contacts The Grass' or 'Ground Material'. 'Four Way Camber' involves rounding at every edge. This is done to reduce 'Resistance' and increase 'Accuracy and Clubhead Speed' which increases 'Distance'.

Cap: n. The top end of a Club's Grip and Shaft. Sometimes called the 'Grip Button' or 'Butt Cap'.

Cardio-Pulmonary: adj. The consideration of 'Heart and Lung Activity' and well-being.

Cardio-Vascular: adj. The consideration of the 'Two Flow Systems of the Blood Circulatory System' (Arterial (outbound blood) and Vascular (returning or inbound blood) as well as the general well-being and function of the heart muscle.

Carry: n. The distance the ball travels in the air. The distance a ball must fly to get across or over a hazard or any other obstacle.

Carry-Over: n. When a hole is tied in a match the prize or reward is added to or 'Carried Over' to the next hole. The purse grows!

Cart Path Only: n. A rule, established at the sole discretion of each facility, that prohibits golf power carts from leaving the prepared cart path. This ruling is usually made during inclement weather in order to protect the fairway and ground from tire abuse.

Cast: v. To release the 'Wrist Cock' prematurely on the forward swing, causing the Clubhead to arrive at the ball ahead of the 'Hands and Arms'. This 'Premature Firing of the Upper Body Machine', especially the 'Brace Shoulder Forward Towards the Target Line', is sometimes called 'Hitting From the Top'.

Casual Water: n. Any temporary accumulation of water, frozen or liquid, on the course that is not part of a defined water hazard. A player may lift his ball from casual water without penalty.

Cavity Back: n. A type of 'Iron Head' design in which the centre portion of the back of the Clubhead is hollowed out or removed. This 'MASS' or material is usually redistributed to the outside of the 'Clubhead' which makes the 'Optimal Percussion Area' or 'Sweet Spot' bigger. What the manufacturers did to tennis racquets was a similar physical design change.

Centre of Gravity: n. The point in the body (internal or surface), where the 'Centre of Mass and Balance' is located. In the 'Human Structure', it is located somewhere in the pelvic region where the torso, legs and hips all come to balance. You are better equipped to 'FEEL' this point than to calculate it.

Centre of Measured Face: n. Point on the face of a Golf Club that is the measured centre of the face, equidistant from the entire perimeter of the Clubhead. Not necessarily the 'Sweet Spot'.

Centre of Mass: n. The point in the actual total material of the Clubhead that is the 'Balance Point' or the overall location of the average mass of the material of which the Clubhead is made. This is not necessarily, indeed not usually, on the surface of the Clubface but is 'internal to the overall material. The 'Centre of Mass' of a ball of uniform material is located in the very centre of the sphere. Most commonly called the 'Sweet Spot'.

Centre of Rotation: n. The axis around which the body turns ,

winds, coils and unwinds and uncoils or releases it coil, usually thought of as the 'Spine or PIVOT Axis'. Colloquially called the 'Body Crankshaft'.

Centre-Shafted: adj. A type of putter head in which the shaft joins or is inserted 'centrally' or equidistant from the toe and heel. The 'Bull's Eye Putter' is well known example.

Centrifugal Force: n. Mechanically it is the resistance of the Inertia in an orbiting object to change in direction. In 'Golf' it is the effort of the 'Swinging Clubhead' to pull the 'Target Lever Assembly' (Target Arm and Club) into a 'Straight Line', or what is known as the 'IN LINE CONDITION'. 'FORCE' that moves 'MASS' away from the 'Centre of Rotation'.

Centripetal Force: n. The 'FORCE' that moves 'MASS' towards toward the 'Centre of a Rotating Body'.

Charge: v. To roll a putt towards the hole with a bold and powerful stroke. If the ball is hole, well done. If it is not, you may well be looking at two more strokes, known as a 'Three Jack' or 'Three Putt'. Not beneficial to your score and putting stats.

Chicken Wing: n. A fault in the Down and Through Swing in which the 'Target Elbow' folds or bends and falls 'Behind the Body' and certainly does not travel 'In Line to the Target'.

Chilli Dip: n. A miss-hit that involves striking the ground well behind the ball location, usually on a soft surface, causing the ball to fly quite high but very short.

Chip: n. A short, low-trajectory approach shot, (usually hit near the green), which rolls farther than it flies.

Chip-In: n. A chip shot that goes into the hole.

Chip-and-Run: n. A chip shot that rolls a great distance upon making contact with the green or ground.

Chipper: n. A club designed only for chip shots, more a manufacturer's marketing effort than a useful necessity.

Choke: v. To collapse under a great deal of personal pressure so that the muscles are incapable of performing to their full potential. Generally a mental failure first before the physical

breakdown takes place.

Choke Down: v. To shorten the effective length of a club by gripping the handle lower than the Target Hand's being at the top or just below the 'Bell of the Grip'.

Chop: v. To hit down on a ball with an axe-like motion to impart extra spin or to 'pop' the ball up and out of a certain situation.

Chunk: v. Similar to a '*Chilli Dip*' or the process of taking a large piece of turf before or below the ball resulting in a miss-hit (FAT) that does not travel very far. n. A miss-hit of the 'Chunk' type.

Clearing the Target Side: v. Turning the Hips to the Target during the downswing so the 'Upper Body Machine, the Shoulders, Arms and Hands' might be pulled along or follow in smooth sequence.

Cleek: n. Ancient term of Scottish origin describing a narrow-bladed iron driving club, roughly equivalent to the modern day #1 or #2 Iron.

Closed Clubface: n. When the 'Toe of the Clubhead' leads the 'Heel' through IMPACT, generally leading to a 'Ball Flight to the High-Energy Side of Target Line'.

Closed Grip: n. Another term which means the same thing is a 'Closed Grip Gate'. This means that the 'V's of the Hands are turned towards the 'Brace Shoulder' or more away from the 'Target' which make the 'Grip' functionally Stronger or more readily active. Think of it as 'Cocking the Gun'. The muscles, bones and joints can perform more 'Work' from this 'Wrist Hinge' position. This condition either includes or promotes 'Wrist Cock and Un-cock', 'Wrist Turn and Roll' and 'Wrist Bend and Bow'. There are 'Nine Wrist Actions or Movements' about the 'Three Wrist Axes'.

Closed Stance: n. The positioning of the Feet whereby the 'Brace Foot' is farther from the 'Target Line or Foot Line' than the 'Target Foot'.

Closed-to-Open: adj. Describing the Clubhead when the player closes the Clubface during the back swing and then opens it during the front swing.

Clubface: n. The grooved or front surface of the Clubhead that

makes contact with the ball.

Clubface Alignment: n. The direction in which the Clubface is AIMED at Address (better still at Impact FIX) relative to the Target Line. More properly called 'Clubface AIM'.

Clubhead: n. The metallic or other material device that is placed at the end of a golf shaft in order to strike the ball; such as a hammer head is placed at the end of the hammer handle.

Clubhead Path: n. The path travelled by the Clubhead during the swing relative to the Target Line.

Clubhead Speed: n. The 'FORCE' with which the Clubhead swings through the Ball measured in Miles per Hour, Feet per Second, etc.

Club Length: n. The length of the overall golf club from the butt of the grip to the Sole of the Clubhead.

Clubhead Lag: n. Mechanically it is the stress occurring at the 'Point of Thrust' by the resistance to Inertia to change. In Golf, it is the FEEL or information transmitted through the '#3 Pressure Point' (Brace Index Finger Middle Knuckle Pad contacting the Handle) by the resistance of the Clubhead to change. This is the 'Wet Mop' or 'Open Parachute' effect. 'Clubhead Lag Pressure' is the 'Secret in Golf' to making a successful Swing. The 'Clubhead' must come through the Ball after the 'Hands'. The 'Hands', supported by a 'Flat Target Wrist' must always 'LEAD the Clubhead' to and through IMPACT. Thus the 'Clubhead' must always 'LAG' behind the 'Leading Hands and Hips' (Lower Body Machine).

Clubhead Throwaway: n. Mechanically this is the allowing of the 'Swingle Of A Flail' to pass its In-Line relationship to the Handle. From a Golf standpoint, this is the allowing of the Clubhead to pass the Hands during Release which sets-up a Centrifugal Deceleration condition in which the Hinge Angles, Brace Elbow and Wrist are In-Line with the Club Shaft and the total Target Lever Assembly. This means Speed bleeds off and things Golf, Speed and Accuracy, are 'Over'. The opposite to 'Clubhead Lag'.

Closed: adj. Term describing the linear aspect of golf components as they are related to Square or Parallel to a reference line. i.e., a 'closed Clubface or a closed Alignment'. A closed Clubface points to the 'High-Energy Side of the Target Line'. A closed Foot Alignment points across the Target Line towards the 'Low-Energy

Side of the Target Line'. If the Clubface were a door opened directly into the hallway or corridor, it would be Square to the centre-line of the corridor. Closed it would be pointing towards the 'Closed Position' and Open would be pointing more towards the 'Open Position'.

Clubhead Path: n. The ground line or path that the Clubhead follows or traces during its swinging motion in the back or front swing related to the Target Line; the centre Ball to Centre Cup or Target. This 'Clubhead Path' may also be related to the 'Inclined Plane' as opposed to the level ground surface.

Clubhead Arc: n. The Clubhead in its swinging motion, as a pendulum in its motion, follows a 'Circular Path'; the 'Circumference of the Swing Circle'. This circumferential shape is called the 'Clubhead Arc'. It is a 'Geometrical Term'.

Clubhead Radius: n. The length or distance of the Clubhead from the 'Swing Pivot Point', i.e. the 'Swing Target Shoulder Socket', such as one might find in a pendulum. The weight swings on a string from a fixed top point, 'Fulcrum or Pivot Point'. The distance from the top of the string to the bottom of the weight is the 'Swing Radius'. The 'Clubhead Radius' is measured to the 'Ground Contact Point' of the 'Clubhead Sole' to the 'Centre of the Target Shoulder Socket' or top of the 'Target Lever Assembly'.

Clubshaft: n. The long thin part of the Golf Club that connects the Grip to the Clubhead. Also known as the 'Shaft'.

Cock: v. The process of bending the wrists on the back swing and un-cocking them in the front swing.

Cocked Wrists: n. The position or condition of the 'Target Wrist's' being Flexed on the 'Horizontal Hinge' (UP and DOWN in relation to the ground or horizontal-level) being applied during the backswing and 'un-cocked' during the 'Impact Interval or Segment' of the forward swing. The 'Hinge is Horizontal but the MOTION or Action is Vertical' as the 'Hinge Pin' in a door hinge is 'Vertical while the Action is Horizontal or Level to the Ground. This physical motion, a '5 Step Sequence', Accumulates, Loads, Stores, Delivers and Releases Power and, thus is called a 'Power Accumulator'. There are '4 Power Accumulators': 1) the Bent Brace Arm, 2) the Cocked Target Wrist, 3) the Angle formed between the Clubshaft and the Target Forearm, and 4) the Angle formed by the Target Arm to the Target Shoulder and Chest. When these 'Pre-

Selected Conditions' are disturbed or altered, there is Work done and Force created, Energy Spent. Golf is full of these actions.

Coil: n. and v. as in the body during the 'Load Side' of the 'Golf Swing'. The full turn away from the ball at address by the 'Knees, Hips, Shoulders and the entire 'Lever Assemblies' which is the 'Major Source of Power' in the 'Golf Swing'. The coiling and uncoiling action produces tremendous 'Primary Rotational Power' which creates 'Clubhead Speed' and thus 'Distance in Ball Flight'.

Collar: n. See Apron.

Combination Flex (Combo Flex): n. Refers to an unitized or parallel tip shaft that may be trimmed by specific guidelines to achieve more than one flex, such as the 'R/S Combo Shaft or L/A Combo Shaft'. This manufacturing technique provides inventory versatility for the builder. Generally the more a tip is trimmed or the shorter the 'A Flex' is cut, the stiffer the shaft will become. Its 'Frequency or Resistance to bending' will increase. The shorter tip is stiffer and offers more resistance to flexing.

Come-Back Putt: n. The follow-up putt after the previous one has rolled past the hole.

Come Off the Ball: v. To lift the body , to come out of the shot prematurely, usually prior to 'Release, Impact (Separation) and Bottom of Swing Arc', generally due to 'Taking Your Eyes Off The Ball' which releases your 'Focus and Head Position' from any 'Impact Condition' leading to a 'Release Condition'. As your Eyes look away from the Butt of the Ball, you naturally translate to the next task, being to see where the Ball is travelling (Target or Pin) and to proceed to walk in that direction, none of which has anything to do with Impact. When your Eyes come off the ball, your Brain no longer receives any visual information or data. When data stops in-feeding to the 'Command Centre' (brain), 'ALL HANDS LEAVE the DECK' and the exercise is over. This is the 'Bail Out' which so plagues tens of thousands of dedicated 'Linksters'.

Come Over the Top: v. To 'Flatten the Swing Plane or Clubhead Arc during the Downswing', 'Casting the Brace Shoulder towards the Target Line', resulting in a 'Throwing Action' of the Brace Arm and the Clubhead Towards (above the Swing Plane) and even OUTSIDE the Target Line prior to Impact, resulting in the 'OUTSIDE-IN Clubhead PATH'.

Compression: n. The degree of resilience and shape distortion a golf ball has when struck by the Clubface. The reverse process is called 'Restitution' or the restoration of the 'distorted Shape' to its original 'Roundness'. It is this 'Compression and Restitution' that causes the Golf Ball to 'Jump Off the Clubface'.

Concede: v. In match play, to grant one's opponent a putt, hole or even the match that has not been naturally completed.

Coning: n. the bore hole in all hozels should be prepared for the shaft by 'Coning' the entry end. This process involves simply 'tapering' the inlet or mouth of the hole so that it is not sharp or burred. This is essential for graphite or composite shafts as any sharp edges will cause wear and damage to the tip of the relatively soft material of the shaft. This 'Coning' should be done at the factory but if it is not, the local assembly technician must perform the duties to prevent warranty liability. A 20 to 225 degree countersink carbide bit is used to relieve the insertion end of the hozel. Once the shaft is epoxied or glued in place, the glue material fills the cone and provides a cushion for the flexing shaft.

Connection: n. Maintaining the various body parts in the appropriate, 'Pre-Selected Conditions and Relationships', in the proper relationships to one another, during the swing.

Conservation Of Angular Momentum (COAM): n. This is a Physical LAW that enables a golfer to produce (store) large amounts of 'Kinetic Energy'. It directly involves 'Centrifugal Force' and the 'Lengthening of the Brace Radius or Brace Lever' which is 'Bent' in the 'Storage Mode' and is unloading in the 'Straightening Mode'. 'Energy Storage or Potential Energy is 'SPENT' when the 'Brace Lever' is in or returns to the 'IN LINE CONDITION'. The 'Brace Lever' is described as a 'Three Lever, Single Action' tool. The delayed 'Straightening Of The Bent Brace Lever Joints', 'LAGGING Behind the Un-COILING HIPS or 'Lower Body Machine', 'Accumulates, Stores and Releases' a great deal of Energy. This process deals with 'Angular Momentum'. (A=ML)

Controlled Shot: n. A Golf Stroke made with 'Less Than Full Power' and likely 'Less Than Full Swing'.

Course Rating: n. The measure of the difficulty of a course relative to other courses as evaluated by the U.S.G.A. or a similar institution or organizing body. It is expressed in strokes or

fractions of strokes required to complete a round based on the or a 'Scratch Player' who plays to a 'Zero Handicap'.

Croquet Putting: n. Putting, as with a croquet mallet, by swinging the clubhead between the legs while facing the target or with hips square to the cup. Deemed illegal in 1967.

Cuppy Lie: n. Golf Ball lying in a small depression, i.e. sitting in a sand-filled or not-sand-filled divot.

Cast: v. Not significantly different than the 'Motion' used in fishing, this action is to 'Release the Wrist Cock Prematurely in the Forward Swing Segment', causing the Clubhead to arrive at the ball ahead of the hands and arms. The 'Brace Shoulder' tends to push forward toward the 'Target Line' during this 'Swing Fault' almost like a 'casting motion'. The term 'Hitting from the Top' describes or applies to this 'Swing Fault'.

Casual Water: n. Water usually in puddles on the fairway or green, in play, that is not permanent. Interestingly, snow and ice is considered 'Casual Water' and precipitates relief.

Centre of Gravity: n. The point in the body, generally in the lower abdominal area or pelvic region, where the torso, legs and hips all balance. It is usually near the 'Centre of Mass' which makes visualization of this point easier. Look for the centre of bulk. This location will FEEL like your 'Balance Point' and certainly will not be far from your 'PIVOT or Rotational Spine', the 'Human Crank-Shaft'.

Centre of Mass: n. The centre of bulk or material. As in a completely uniform density and perfectly round golf ball, this 'Centre of Mass' is equidistant between two opposite surface points such as the North and South Poles, i.e. in the centre of the core.

Centre of Rotation: n. The axis around which the body winds and unwinds, usually thought of as the inclined spine. The 'Human Crank-Shaft or Spinal Hub'.

Chicken Winged: adj. Term describing the 'Bent Condition of the Target Lever', especially through the 'Impact Zone' and into the 'FOLLOW-FINISH Stages of the Swing'. It is in this 'FOLLOW-FINISH Stage' that the 'Bent Target Elbow' will peak or become visible behind the players back when viewed from the Brace or Aft Line. A straight, well-extended 'Target Lever' (Arm) will only be visible

in front of the Hips and NOT behind the Back. The 'Chicken-Winged Target Elbow' will FEEL quite 'Close or Tight or Round-Housed' to the Target Side and Hip. This physical movement or action is NOT beneficial to a good Golf Swing.

Clearing the Target Side: v. Turning of the 'Loaded or Coiled Target Hip' strongly toward the Target which naturally brings along the Brace or trailing hip. The body and 'Lever Assemblies' of course follow Hip Rotation directly. This transfers power to the golf Clubhead and thus directly to the backside of the waiting Ball.

Cleek n., Modern term for a V Wood

Clubhead Speed: n. The 'Velocity of the Clubhead' (MASS) usually considered at IMPACT or the 'Moment of Contact and/or Separation' with/from the Ball.

Clubhead Path: n. The path travelled by the Clubhead during the swing, usually considered in relationship to the Target Line and the Spine or body axis.

Coming off the Ball: v. To lift the body prematurely during the forward swing. Often called 'Bailing Out' or 'Quitting' the very positive and controlled process before IMPACT. Stopping doing your job before the Ball goes away.

Compression: n. a term describing the density of the golf ball or the Impact Force of the Clubface onto the malleable Golf Ball. Impact 'squashes or distorts' the roundness of the Golf Ball in line with or at 90 degrees to the Impact. This 'distortion' is due to 'Compression'. The degree of Resilience of a Golf Ball.

Concede: v. In match play, to grant one's opponent a putt, hole or match that has NOT been completed.

Cross-Handed: adj. A putting Grip in which the Brace Hand is placed above the Target Hand. It is also called 'Target Hand Low' or for right-handers, 'Left Hand Low'.

Crossing the Line: v. 'Manipulating the Clubhead' so it comes at the ball from outside the Target Line towards the Inside in the downswing, usually resulting in a ball that is either 'Pulled' 'High-Energy Side of Target Line' (fast Hands) or 'Cut Low-Energy Side of Target Line' (slow Blocked Hands). Also a term for the

Clubhead and Clubshaft's getting closer to the 'Target Line' at the 'Top Of Back Swing' than 'Parallel' (Across the Line) or 'Below Horizontal' (Under the Line).

Crosswind: n. Breeze blowing from one side of the fairway or 'shot lane' to the other across the Target Line.

Cup: n. the 4.25 inch wide 'cup shaped' receptacle that is installed below-ground-level in the confines or within the boundary of the green or putting surface, into which one must strike the golf ball before the singular hole is completed or 'holed'.

Custom-Fitted: adj. A description of equipment designed specifically for one individual.

Cut: n. A score or determined level of performance for a specific event that eliminates a percentage of the field from a tournament. Also a verb meaning to 'Impart Spin on the Ball' with a glancing blow or 'Cutting Action' causing the ball to arc in its Ball Flight, usually towards the 'Low-Energy Side of the Target Line' as the other way, although a 'Draw' is termed a 'Cut-Shot'.

D

Dance Floor: n. colloquial term for the green or putting surface.

Dead adj. In Match Play, when the leader is ahead by more points than there are holes to play, i.e. He cannot be beaten or tied, the opponent is 'Dead' and the match is over.

Dead Hands: n. The condition of the hands in a 'Golf Shot' whereby they exert little or not 'Force' or 'Action'. They will be 'Passive and Static' through the 'IMPACT Zone' or 'Hitting Interval'.

Dead Wrists: n. When the Wrists remain firmly 'Passive' without 'Cocking or Un-cocking' or 'Releasing' through the Impact Zone or Interval.

Dead Hands: n. When the Hands are very 'Passive', more 'Dropping Down' than 'Firing Down' and through Impact, such as is so useful, even essential, in the 'Short Game' which takes place inside your 'Full Swing Pitching Wedge' or what might be more commonly known as 'Inside 100 Yards'. The 'Dead-Handed' and 'Clocking' technique of delivering the Clubhead to the Ball produces very accurate and controlled 'Clubhead Speed' to and through the Ball, thus it equally and directly controls 'Distance'.

Dead Weight: n. Term for the actual mass weight of an object such as a 'Golf Head' or an 'Entire Golf Club'. 'Dead Weight' is the same as one would determine his own weight was by standing on a doctor's office scale. If one weighs 160 pounds, that is 'Dead Weight' or static weight as there is no momentum or velocity involved.

D.O.F.T.: n. phrase describing the 'Three Dimensional Clubhead Path' which is 'Down, Out, Forward and Through' the Ball.

Deceleration: n. 'Slowing the Speed of the Clubhead or Body Rotation', which when done prior to or during IMPACT is a negative occurrence detrimental to 'Optimal Ball Performance'.

Delayed Hit: n. Retaining the 'Wrist Cock' until very late in the forward swing, well into the 'Impact Zone', resulting in increased 'Leverage', 'Compression' and perhaps 'Clubhead Speed'.

Divot: n. A piece of turf displaced or ripped from the ground by the Clubhead after or before making contact with the ball.

Dogleg: n. A hole or fairway characterized by a sharp turn in either direction, as in a 'Dog-leg Left or Right'.

Dormie: adj. The point in a 'Match Play Event' when a player is ahead of his opponent by the same number of holes as are remaining. In this situation the best results that the trailing player can attain is a tie. The number might sound like "5 and 5" meaning up by 5 holes with 5 holes to go.

Double Bogie - Bogey: n. A result of two stroke more than PAR on any one golf hole.

Double Eagle: n. American version of an albatross, being three under Par at any particular hole.

Downswing: n. The swing that is the reverse or opposite to the 'Back and Up Swing' which 'LOADS' the 'Golfing Machine' or makes it ready to perform 'WORK'. It can be appropriately called the 'Down and Out Swing'. Hence the 'Geometric Shape Of The Golf Swing' is 'D.O.F.T.' which stands for 'Down Out Forward and Through' the Ball' and 'Target Line'.

Draw: n. Term describing the shape of a Ball Flight, bending or curving progressively from Impact and Separation towards the High-Energy side of Target Line.

Duck Hook: n. Term describing the radical or pronounced 'Drawing Action' of a 'Ball Flight'. The termination end of this 'Ball Flight' is very curved almost coming 90 degrees to the 'Target Line'.

Duncan, George: N. (1883-1964) British Open champion of 1920 who went on to play in the first three Ryder Cup Matches.

Duration: n. The overall time required for a golf swing or stroke, usually from the moment of 'Take Away' to the instant of Impact and possibly through to finish depending on your consideration. Full Swings require more 'Duration' than do 'Less Than Full Swings'.

Dog Leg: n. A name that refers to the longitudinal shape or line of a fairway or other portion or length of a golf hole. It is a hole that bends or curves to the right or left off the teeing ground or down the fairway. There is some skill and planning required to negotiate these design characteristics.

Dormie adj. In match play where you win, lose or 'Halve' each hole, one at a time, as opposed to 'Stroke Play' where you play each hole to the completion of the round and then total your strokes for the entire round to determine the winner (player with the least number of strokes), when you are trailing or behind by 2 points or two holes with two to go, leading by as many holes as you have left to play, the leader then cannot lose and is classified as 'Dormie'. The opposing player or team must win every hole to 'Tie the Match'. This is from the French word for 'To Sleep', meaning that the leader can go to sleep or rest as his day's work is over.

Double Bogey: n. Term for 'One Stroke More Than Par' in any one separate hole plus an additional stroke, thus two strokes over Par.

Downhiller: n. A downhill shot or putt.

Downhill Lie: n. When a player's Brace Foot is higher than his Target Foot at Address, causing him to make compensations to hit a good shot.

Drag: v. An aerodynamic force that resists the forward movement of an object, affecting Clubhead Speed and Ball Flight in Golf.

Drain: v. To sink a putt.

Drive: n. The first shot on a hole, played from the tee generally played with a driver or wood of some nature, but not necessarily so. The stroke of a 'Par Three' with a #7 Iron is still a drive although most often called an 'Iron Shot'.

Driver: n. The longest shafted and biggest headed golf club in your bag. It is designed to strike the ball as far as possible and has the physical characteristics to accomplish that feat. The overall length of this club ranges from 43 to 38 inches. The head size may not exceed 460 cc in volume displacement.

Driving Iron: n. Old name for a #1 Iron with its least amount of loft. Designed for maximum distance.

Driving Range: n. An area for hitting practice shots. Also called the 'Practice Range'.

Drop: v. To put a ball back in play after it has been lost or retrieved from an unplayable lie.

Dub: n. A poorly played shot, usually one that dribbles along the ground. A dubber is one who strikes balls in this manner or fashion.

Duck Hook: n. A violent Hook (huge amplified Draw) that usually flies quite low and hits the ground quite quickly.

Duff: v. To hit the ground immediately behind the ball.

Duffer: n. A poor or bad golfer.

Delayed Hit: n. Retaining the 'Wrist Cock' until the last possible moment in the forward or downswing, just before IMPACT. It may be called a 'Late Hit'.

Driver: n. The #1 Wood of the Wood, Metal or Composite Clubheads at the end of the longest shaft in your club assortment and having the least amount of 'Loft' or the most upright Clubface of all your Golf Clubs. The specified 'Loft' is usually between 7.5 and 11.0 degrees off vertical. This design strikes the ball farthest with the lowest trajectory.

Drop Zone: Drop zones are marked areas on the course where you can take relief from certain situations such as 'Ground Under Repair' ('GIR') wet areas or temporary immovable obstructions. In some cases where there are long forced carries, one might come up short and lose a ball in a hazard such as a pond. Then one must 'Drop A New Ball In The Provided Drop Area' and proceed from there with a one stroke penalty.

Dynamic Balance: n. A centeredness of 'MASS' or 'Body Weight' inside the 'STANCE Pedestal' during the entire 'Back and Front Swings' so as to maintain functional control.

E

Extension: n. The 'Straightened Condition of the Target Arm (Lever) at IMPACT and the Brace Arm (Lever) in the Release', 'Follow Through' or 'Deceleration Segment #3 of the Swing'. Extension should be 'Down the Target Line to the Pin'. This term also applies to the 'Position of the Target Arm at the Top of Backswing'. (T.O.B.)

Eagle: n. Two under Par on any single Golf Hole.

Eclectic: adj. Competition played over a given number of rounds, the player counting his best score on each hole. Also known as a 'Ringer Score'.

Effective Loft: n. The actual loft of a Clubface when it strikes the Ball. Owing to the design of the Clubhead and the player's technique, this may be different from the factory-built-in loft of the Clubhead. Factory produces the 'Loft'. We can manipulate this 'Factory Condition' to what is sometimes called 'Net Effective

Loft' which is the 'Final Loft when the Ball Separates from the Clubface'.

Elbow Cock or Bend (Brace Lever): n. The cocking or un-cocking, bending & straightening, of the Brace Elbow in the back and forward swing.

Embedded Ball: n. When a portion of the ball is below the surface of the ground.

Equity: n. Decision not covered by the rules.

Evans, Charles: N. 'Chick' (1890-1979) One of America's great amateurs, Evans in 1916 became the first man to win the U.S. Open and the U.S. Amateur Championship in the same year.

Explosion Shot: n. A shot in which the ball is exploded from sand or tall grass, any loose deep material.

Extension: n. The condition of making or being longer than may be or is the normal case. The width of the 'Golf Swing' is measured by the length of the 'Extended Target Lever' on the 'Back Swing' and generally by the length of the 'Straightened Brace Lever' in the 'Follow and Finish Segment'. In a proper 'Golf Swing' one 'Lever' is 'Straight or Extended' at all times.

F

Face: n. The grooved or leading surface of a Clubhead that comes in contact with the Ball.

Fade: n. A controlled shot that flies, has a curved flight, to the Low-Energy Side of the Target Line.

Fairway: n. The closely cropped grass that lies between the teeing ground and the putting surface, and between the Left and Right rough.

Fairway Wood: n. Category of any of the wooden or metal-headed

woods clubs that have more Loft than the driver. A driver may, of course, be used from the fairway.

Fanning the Clubface: v. An exaggerated 'Rolling Open of the Clubface' during the takeaway of backswing or front swing.

Fat: adj. Describing a shot in which the Clubhead strikes the ground before the ball, sometimes taking a large divot from behind the 'Ball Location'. This means there is debris between the Clubface and the Ball which impedes pure contact and 'Optimal Ball Flight'. Also referring to the widest, safest, easiest to hit or fattest part of the green.

Feather: v. To hit a high, soft-landing shot that usually fades a little and stops quite quickly upon landing due to both Side and Under Spin.

Feathery: n. Ball made of compressed feathers encased in leather that was shrunk. Commonly used until the mid 19th century.

Feel: n. A sense of touch, particularly over the shorter shots around the green.

Flange: n. A portion or description of the 'Sole' of the 'Golf Club' as in the 'Sand Wedge' with its broadened flange.

Flagstick: n. The device that fits into the quarter-sized hole in the bottom of the cup that resides on the green. The 'Flagstick' has a piece of linen or cloth on its top to enable the player to see the location of the cup from a distance. It is more loosely referred to also as the 'Pin'

Flatswing: n. Swing in which the arc is closer to a horizontal than vertical plane.

Flight: n. Trajectory of the ball.

Flip Shot: n. A 'Wristy Shot' that is usually played or executed with a 'Short Shafted Club' with considerable 'Loft'. The 'Lob Shot' might be classified as a 'Flip Shot'. This type of 'Action' is generally NOT desirable.

Floater: n. A ball that is struck from the tall grass causing it to come out of the 'Lie' slowly and travelling a short distance. This 'Power or Energy Loss' is due to the cushion created by the grass

that got onto the 'Clubface' before the Ball.

Flop Shot: n. Similar to the 'Flip Shot' usually created with a 'Golf Club' of considerable loft or 'Net Loft' that can be created by 'Opening The Clubface AIM' causing the 'Heel To Lead Into The Ball Contact'. Similar to the technique employed in 'Bunker Work'. Good 'Brace Lever Extensor Action' is required.

Flyer: n. A ball that comes off the 'Clubface' with little or no Under-Spin' due to the presence of 'Material' being on the 'Clubface' preventing the 'Grooves and Face' actually making contact with the 'Golf Ball'. The flyer 'Ball Flight Characteristics' are due to insufficient 'Under Spin Rate'. It is a bit like the 'Baseball Knuckle Ball'.

Fescue: n. A cool-weather grass commonly found near salt water. It is a standard on traditional 'Links' courses.

Foot Line: n. the Alignment of the player's toes (or Heels) at Set-Up and through the entire swinging motion. To determine the Set-Up Alignment, one might place the shaft of a long iron or wood across the toes and sight down the centre of the shaft towards the Target. This line is your 'Alignment or Foot Line'.

Fade: n. Term for a gradual progressive curving Ball Flight off the Clubface towards the Low-Energy Side off the Target Line.

Fairway: n. Term for the cut portion or mowed surface between the 'Teeing Ground (Tee Box) and the Green'. There may be areas between the Teeing Ground and the Putting Surface that are barren, scrub, rock, desert or other unprepared surface which is not considered fairway but must be cleared by the 'Ball Flight'. This is known as 'Target Golf'.

Fat: adj. Term describing Clubface to Ball contact or Impact where the 'Leading Edge of the Clubface' strikes the Ball below the 'South Pole' of the ball, usually taking dirt or grass 'Before Impact'. Fat hits are 'Dirty Hits'. Fat hits decelerate the Clubhead Speed and thus reduce Distance and, usually distort Clubface AIM effecting 'On Line' Ball Flight.

Fernie, Willie: N. British Open champion of 1883, despite scoring a 10 in one hole!

First Cut n. When the greens keepers are mowing the fairways, there

is a point on the outside or shoulder of the fairway where they stop cutting the grass at the same shortness or at all. If they elect to make a lane with grass cut longer, i.e. Two inches long, which increases the difficulty of making a shot from that grass depth, it is called the 'First Cut'. If, additionally, they decide to make another lane with the grass four inches deep, it may be called the 'Second Cut'. It is more difficult to play out of. The next lane is called the 'Rough'. You may not get out of it at all.

Flag: n. Linen or cloth affixed to the top of the steel or composite rod or shaft that sticks into the bottom of the cup in what is known as the 'Pin Hole'. This flag is intended to make the stick more visible and thus identify where the cup is located, which should be directly below the flag.

Flag Stick: n. A tall, narrow stick placed in the hole at the bottom of the cup and supporting a Flag on its top indicating the location of the Cup on the green to the player.

Flange: n. 'TOOL' Term. The additional surface and material protruding from the bottom of the Sole of the Clubhead that prevents the 'Leading Edge' from digging into or biting into the material through which it is travelling, such as sand and soft sod. The Clubhead generally does not bite too radically into 'hard pan'.

Flat Swing: n. A swing that moves the club on a more horizontal plane or more 'Around the Body Spine' than might be optimal. If a club were to swing completely horizontal to the ground, it would be very 'Flat' as opposed to 'Upright and Vertical' if the case were that the Club were to be moved more up and down in the swing.

Flex: n. Term for the bending moment or back and forth movement of the Clubshaft during the loading and unloading, stressed and relieved, condition of the Clubshaft in the entire swing. Where there is 'Flex' there is also 'Reflex'. Bending of a spring device always takes place in two directions, i.e. 'Load & Unload'.

Flex (Shaft): n. is the relative amount a shaft will bend during the loading and unloading sequence of the entire golf swing. Generally denoted as the 'Alpha' and 'Beta' swing segments, the total of these two 'Loads' is used to determine the 'Flex Needs' of the client. The higher the total 'A & B' flex, the stiffer the shaft requirement. These flex aspects the higher the 'Kick Points' will be also.

Flier - Flyer: n. A shot, usually struck from the long grass, that flies much farther than a normal shot owing to a lack of backspin.

Flip Wedge: n. A short, Less Than Full Swing, shot with a high trajectory and also high handed Finish, intended to land softly and stop quickly on the green. Also called a 'Flop Shot'.

Floater: n. A shot struck from deep grass that comes out slowly and travels shorter than normal as opposed to a flier. Also a variety of golf ball used on driving ranges with water. They float and can be recovered from the surface as opposed to from the bottom.

Flop Shot: n. A soft, high shot usually played to the green with an outside-in swing path that cuts under the south pole of the ball. It is useful when pitching over a bunker or any other hazard where there is very little green on front of the ball (landing area) with which to work.

Fluffy Lie: n. A lie in which the ball is sitting up on the blades or top of the grass with room for the clubhead to get under the ball. Caution that the 'Chilli Dip' is made of this type of lie.

Follow-Through: n. The continuation of the swing after the ball has been struck and left the clubface.

Foozling: gerund. Colloquial term for managing clumsily; bungling, especially making a poor stroke in Golf.

Fore: v. Warning shout to other players in danger of being hit by a ball in flight.

Forecaddie: n. A person employed to go ahead of a group of players and mark the position of the balls in play.

Forward Press: n. A movement of the Hands and Arms toward the Target that can assist the player in starting the backswing smoothly. This Set-Up move also sets or establishes the Impact FIX of the player.

Four-Ball: n. A match format in which two partners match their better score on a hole against the better score of the other team.

Foursome: n. A group of four players who play the round on the same hole in that grouping.

Free Drop: n. A drop without penalty.

Freeze: v. Inability to begin the backswing, brought on by a nervous condition that prohibits starting the muscular process. Most common in the putting stroke.

Frequency: n. a method by which golf shafts can be scientifically calibrated to determine 'Flex or Stiffness', resistance to bending, based on vibrational frequency or 'Frequency Co-efficient'. With a predetermined head or dumb-weight installed at the tip of the shaft, the shaft is loaded (flexed) and unloaded (released) causing it to flip up and down, back and forth, taking place at a certain rate per minute or 'frequency'. The faster the frequency the stiffer the shaft or the more resistance it offers to bending.

Fried Egg: n. A type of lie in which the ball is partially buried in the sand or other loose material or sitting in its own hole.

Fringe: n. The area around the green that has not been cut to the same shortness as the putting surface. There may be more than one depth or length of grass. The shorter of the two is called the 'First Cut' while the longer is called the 'Second Cut' such as the case in the fairway cuts that are longer than the actual fairway.

Frog Hair: n. Colloquial term for the fringe or apron around the green.

Front Nine: n. Colloquial term for the 'Outward or First Nine' Holes in an eighteen hole course.

Flop Shot: n. A short game shot, made with a lofted wedge such as a #SW or #LW, that goes higher than it goes long and generally lands very softly.

Full Swing: n. The longest swing you can physically make, hopefully in comfort.

Fuzzy: adj. Term describing the putting surface when it is slightly longer than desired or than usual. Not unlike a close-shaven face that has one day's growth.

G

Gap Wedge: n. A wedge, Short Iron, with a loft between the Pitching Wedge and the Sand Wedge.

Gaol: n. Old English for 'Jail'.

Getting Up & Down: v. This is not about a 'Pair of Shorts'! Term for getting out of a difficult situation, trouble such as a 'Bad Lie' and still 'Making PAR'. An example is hitting an 'Approach Shot into a Bunker', taking your 'Sandie' out and getting the Ball nice and close to the Pin; close enough to hole the next stroke for a PAR. That's a save.

Gimmie: n. A very short putt, often conceded by an opponent in match play. In stroke play all putts must be holed.

G.I.R.: n. Abbreviation for 'Greens In Regulation'.

Golf Engines: n. There is a 'Priamry Engine' which is the 'Lower Body Machine' producing its 'Horizontal Round & Round Motion' which propels the 'Golf Ball' in the same direction and plane. ('PUSH FORCE') The 'Secondary Golf Engine' is the 'Upper Body Machine' which produces all the 'Vertical Up & Down Motion' in order to move the 'Golf Club' back down to the ball from the 'Top Of The Back Swing' ('TOB') with 'PINCH FORCE'. The 'Secondary Engine' produces the 'Puttign and Chipping Actions' without the aid of any 'LBM' 'Pivot Pressure'.

Golfing Machine (Upper & Lower Body): n. Specific term for the entire player's body which is divided into two portions; the Upper and the Lower; 'Belly Button Up and Belly Button Down.'

Gorse: n. Thick, prickly shrub usually found on the 'Links' in Great Britain and apt to swallow your ball, forever.

Grain: n. The direction in which the blades of grass on a putting green grow, which affects Speed and Direction of the roll. The fringe and rough usually has some grain as well.

Grand Slam: n. A title, event or results that include winning the 'Four Major World Professional Championships' in one calendar year. These events include the 'PGA Championship', the 'Masters', the 'British Open' and the 'U.S. Open'. The 'Career Slam' is

accomplished by winning each one of these 'Majors' at least once in your lifetime or career.

Green: n. Colloquial term for the closely-mown putting surface.

Greenie: n. Slang for hitting a 'Green In Regulation' or the number of strokes allotted in the process of achieving a Par and being 'Closest To The Pin' ('KP').

Greens In Regulation: n. A statistic, expressed as a percentage, that measures how often a player hits his approach shots onto the green in two strokes less than whatever is Par for the hole.

Greens Keeper: n. The employee responsible for the maintenance of the course, such as the 'golf course superintendent'.

Grip (strong & weak): Term for the placing of the Hands onto the Golf Club Handle for the purpose of controlling its motion.

Groove: n. A narrow scoring line cut into the surface of the Clubface that imparts 'Bite' and thus 'Spin' on the Ball. Also as in 'Being in the Groove'.

Gross: adj. Describing a score made before any deductions or adjustments are made to handicap the score. This is raw shot count.

Ground: v. To touch the Clubhead to the ground behind the ball at address or at any time in a hazard, be it of sand or water.

Group: n. A body of golfers usually on one hole and not exceeding four individuals.

Group Lesson; n. A 'Golf Lesson' involving more than one person student and one or more instructors or teachers.

Ground Under Repair: n. Any area on the course undergoing maintenance work and designated as such, from which a player may receive a 'Free Drop'.

Grounder: n. colloquial term for striking a golf ball with any club and failing to get it properly 'Air-born' but causing it to run along the ground more like a bowling ball than a golf ball. Sometimes called a 'Daisy Cutter' or a 'Worm Burner'.

Gutty: n. another type of 'Golf Ball' that was 'Cored' or had a

centre comprised of 'artificial rubber-like material' (balata). Also called the 'Gutty Percha Ball'.

Gyroscopic Action: n. Mechanically, a spinning wheel resists any effort to change its Plane of Rotation. In Golf, a golf club swinging either 'ON or OFF PLANE', naturally resists any attempt to change its Plane or alter its established 'Orbit'. Once you get your 'Clubhead Path' off-course, it is very difficult indeed to correct any deficiencies. Start it right and keep it right to finish it right.

H

Hacker: n. An unskilled golfer also called a 'Duffer'.

Half: n. In match play, a tied score on a hole. Each hole represents one point, thus in this tied situation, each side receives or counts one half point each or no point is awarded.

Half-shot: n. Stroke with a curtailed swing that is taken back about half the distance of a full swing generating about half the distance. This is a short game technique and strategy.

Handicap: n. The number of strokes a player is able to deduct from his 'Gross Score'. It is based on past performance and the difficulty of the course, called 'Slope Rating'. This process is designed to adjust one's scoring ability to that of a scratch player.

Handicap Differential: n. The difference between a player's 'Gross Score' and the 'Course Rating'.

Handicap Index: n. The measure of one's golf ability, which is the number that determines a player's handicap on a given course.

Hardpan: n. Very firm turf, often without grass.

Hazard: n. an area inside the bounds of the gold course, in play, from which a ball cannot be struck 'normally' if at all and for

which there is some degree of penalty, if only in difficulty. A bunker or sand trap is a hazard, in which one may not 'Ground His Club'. A lake or pond is also a hazard with much more obvious penalty.

Heavy: adj. Striking the ground marginally behind the ball taking dirt and grass before the ball, Also known as fat.

Headwind: n. A breeze blowing into your face which is against the direction of your 'Ball Flight', thus shortening your Distance

Heel: n. The end of the Clubhead nearest to the player's feet at address, usually where the golf shaft enters the Clubhead. The heel is found at the base of the hosel.

Heel Weighed: n. The physical condition in a 'Golf Clubhead' of having more weight dispersed towards the 'Heel or Toe'. It is a matter of 'MASS and Centre Of Gravity' (COG).

Herd, Alexander: N. 'Sandy' (1868-1944) British Open champion in 1902, a great bunker player.

Hickory: n. Wooden shaft or a wooden-shafted golf club, subsequently replaced with steel and composite shafts.

High Side: n. That area of the green above the hole, especially when the cup is on the slope, Also called the 'Pro Side'. It is the smart side from whence the Ball might actually roll into the hole by gravity. This will not happen from below the hole!

Hilton, Harold Horsfall: N. (1869-1942) The best amateur of his era, Hilton won the British Open in 1892 and 1897, the British Amateur four times, and the U.S. Amateur once, He was also the editor of a new trend called the 'Golf Monthly'.

Hinge Actions: n. Of the Hips are 'Forward Inclination and Lateral Tilting, forward and Aft, Target or Brace Side'; Of the Shoulders are 'Laying Back and Closing'; Of the Elbow are 'Bending and Straightening, Up and Down'; Of the Wrist are the 'Three Basic Wrist MOTIONS' which are classified as: 1) '**HORIZONTAL**' Bent, Flat and Arch controlling the Clubshaft via GRIP MOTION; 2) '**PERPENDICULAR**' Cocked, Level and Un-cocked controlling the Clubhead via Wrist MOTION and 3) '**ROTATIONAL**' Turned, Vertical and Rolled controlling the Clubface via Hand MOTION.

Hitter: n. A golfer who tends more to 'Hitting The Ball' than 'Swinging Through It'. More 'Brace Side Explosive Action' than the basic 'Swinger' who utilizes 'PIVOT' more exclusively to generate 'Clubhead Speed' and 'Kinetic Energy' (Momentum, Inertia, Velocity which denoted by the initials 'MIV').

Hitting and Swinging: gerunds. Examples are the catapult versus the sling. Mechanically, the continuous 'Thrust' producing steady 'Acceleration' of a hinged beam is a 'Hitting Action'. A rotating body and connected arm pulling steadily on a weighted line is a 'Swinging Action'. In Golf, 'Accelerating the Clubhead radially with Brace Arm Thrust' is 'Hitting'. 'Accelerating the Clubhead longitudinally, with either arm', is 'Swinging'. 'Centrifugal Force of Slinging a Weight at the end of a cord' is 'Swinging'.

Hog's Back: n. A large ridge running across a green or fairway.

Hold The Green: v. The action of a ball's hitting the putting surface and staying there as opposed to hitting and running off the putting surface or 'Dance Floor'.

Hole: n. synonymous with cup or a term for one complete 18th of a full 18 hole round of golf or course.

Hole-High: adj. Referring to a shot that finishes even with the hole or the right length, even if not On-Line.

Hole-In-One: n. A tee shot that finishes in the hole; a hole played in one stroke. Also called an 'ACE'.

Home Hole: n. The last hole of a round. The eighteenth hole of the round is #18 if the player started at hole #1.

Homeward Nine: n. The back nine holes of an eighteen hole course. Also the 'Inward Nine' as the front nine is the 'Outward Nine', going away from the clubhouse, the safe-haven!

Honour: n. The privilege of hitting first off the teeing ground, awarded to the player who had the lowest score on the previous hole. If there is no change in the finishing order or results, the honour remains in the hands of the last person to have 'Earned the Honour'.

Hood: v. To tilt the Clubface forward by leaning the grip towards the Target, reducing the Clubhead's 'Net Effective Loft'.

Hook: n. Term for a golf shot that causes the ball to curve markedly and progressively off the clubface in the direction of the 'High-Energy Side of the Target Line'.

Hooper n. a colloquial term for a 'caddie'.

Hooded: adj. Colloquial term for the position of the Clubface's being 'CLOSED' or aiming quite towards the 'High-Energy Side of Target Line' with a relatively standard Grip in the 'Address FIX or Impact FIX Positions'.

Hosel-Hozel: n. The hollow part of the Clubhead extending up from the heel where the shaft attaches to the entire Clubhead. The hozel is just above the 'Neck' of the Clubhead; the metal part extending from the aft portion of the face and head, curving up towards the hozel.

Howk: v. To dig out, figuratively speaking; to extricate from a tough lie.

Hustler: n. A golfer who purposefully maintains (or claims to maintain) a handicap higher than his true skill level so he can easily defeat other golfers. Also 'Sandbagger'. Hustlers can also just be great scoring golfers who do not appear to be such. These types can take advantage of those who think they are better than they might be, and do so profitably! 'OH, This little fat guy, he'll be a push-over!' \$100.00 later on top of lunch and drinks, you have become older and wiser. It may be prudent to never 'Judge a Book by its Cover'. A tip: good golfers always have 'Sun-burned arms, Squinty Eyes and will be handling or swinging their Golf Club a lot in one hand, which will be the Target Hand.'

I

IMPACT: n. Mechanically, objects meeting in collision. From a Golf perspective, it is the coming together of the speeding Clubhead and the passively waiting Golf Ball; Object in motion and object at rest leading to rapid Energy transfer from the High-Energy object

to the Low-Energy object. The Moment of the Ball and Clubface's coming in contact.

IMPACT FIX: n. There is one 'Mechanical Imperative' in the Golf Stroke and it is 'Correct IMPACT Alignments'. We need these in order to play or accomplish 'ALIGNMENT GOLF' as opposed to 'Position Golf which is a 'Close Relation to Get Lucky Golf, which is an Ugly Step Sister to 'Crap Shoot Golf'. There is no advantage to leaving the 'IMPACT SET-UP or FIX' properties to chance. If they cannot be consciously defined and Pre-Selected, they likely are not reliable and repeatable.

Impediment: n. Loose debris that may be moved from around a ball as long as it is NOT in a hazard. The ball may NOT be moved in the process of removing any 'loose impedimentum'.

Improve Your Lie: v. To move the ball illegally or affect the area around it so the next shot is easier or 'improved'.

Index: n. Method of rating a player's overall performance based on his play at numerous courses that each have been 'Slope Rated' for their individual degree of difficulty. The combination of Slope Rating and handicapping produces a player's INDEX.

Inclined Plane: n. Not unlike a pitched roof, in Golf it is the 'Through-the-Waist' 'Plane of Rotation of the Clubshaft' as established during Address and/or Impact FIX.

Initial Ball Flight Direction: n. The initial direction that the ball travels when it comes off the Clubface relative to the 'Target Line' or 'Pre-Selected Ball Flight Line'. This 'IBFD' is primarily controlled or created by the 'Clubface AIM' and secondarily accomplished by 'Clubhead PATH'.

In Play: adj. An object inside the boundary of the course and inside the boundary of the hole which can become a factor in your game; in the process of getting your ball into the hole in the least number of strokes humanly, personally possible.

Inside: adj. Nearer to the hole than another player's ball.

Inside To Inside: adj. Describes a 'Swing Path' in which the Clubhead approaches the ball from 'INSIDE' the 'Target Line', makes contact (IMPACT) and then returns to the 'Inside of the Target Line' after IMPACT and during the 'Follow Through and Finish

Phase'. (**I/I PATH**)

Inside To Outside: adj. Describes a 'Swing Path' in which the Clubhead approaches the ball from the 'INSIDE' and then generally through IMPACT travels to the 'Outside of the Target Line' but ultimately returning to the inside simply due to the 'Lever Assembly's Rotating Around the Spine'. This PATH usually creates Draw which induces 'Counter clockwise Rotation' of the ball about its 'X Axis' or the 'Vertical Axis'. (**I/O PATH**)

Intended Line Of Flight: n. An imaginary line drawn through the ball and extending to the intended Target. Also called Target Line.

In The Leather: adj. Describing a putt that is closer to the hole than the length of the putter's grip; or alternately closer than the distance from the putter head to the bottom of the grip.

Intermediate Target: n. A leaf, divot, cigarette package or any other object or mark just in front of the ball and lying directly on the 'Target Line', used as an 'Alignment Aid'. This aid must have either been 'In Place' before you arrive at the site of the next strike or must be 'natural'. One cannot place an 'Intermediate Target' I place. A little trick, however, is to locate one on the tee box already and Tee AIM your Ball accordingly.

Iron: n. Any of numerous golf clubs with an iron Clubhead and available in a variety of lofts and designs. Not a wood or a putter.

'IZES': n. Short for the learning process components; 'Conceptualize', 'Intellectualize', 'Actualize', 'Visualize', 'Theorize' and 'Analyze'.

J

Jail: n. Colloquial term for being at a spot from which it is impossible to play a safe next shot.

Jigger: n. Gaelic term for a metal golf club with a very narrow

face.

Jumper Lie: n. Sometimes known as a 'Flyer Lie', this situation usually involves grass sitting behind the ball, which causes the ball to 'Squirt or Jump Off The Clubface Surface' without the luxury of any 'Bite' by the score lines or grooves on the face of the club. These are designed to impart certain actions upon the ball. When they do not, the ball 'Squirts or Flies' off the face.

K

Kick: n. An unpredictable bounce taken by the ball after it lands.

Kinesiology: n. The scientific study of human movement and the motions of tools and equipment used in sporting activities.

Kinetic Energy: n. The energy associated with the speed of an object. Energy - Mass in motion. Increasing Clubhead velocity produces more kinetic energy and thus more Distance.

Kirkaldy, Andrew: N. (1860-1934) Runner-up in the British Open in 1879, 1889, 1891, Kirkaldy was the Honourary Professional to the Royal and Ancient Club (St. Andrews) from 1910 to 1933 which was a high honour.

Knee-Knocker: n. A short putt, usually in the two to four foot range, that causes a golfer mental and physical anxiety.

Knock-Down: n. A deliberately low, boring shot that holds its line into the wind. Sometimes used to escape from or avoid overhanging branches or other trouble. Also a 'Pinch Shot'. This 'Ball Flight' is usually created by a 'Ball Location' that is 'Aft' of the 'Optimal Ball Location' (TAP TAP TAP Position) for a normal shot.

L

Lag: v. 'Lag' is defined as the 'Condition of Trailing or Following' and any 'Component' that is such, placed 'Drag' or 'Negative Pressure' on the 'Preceding Component' or the 'Component that is Closer to the Source of POWER'. This 'Drag' is proportional to the 'Rate of Acceleration' of the 'Leading Component'.

Lag Putt: n. A type of putt that is not meant to go too far past the hole but to safely get very close to facilitate making the second stroke. This prevents three putts.

Laidlay, John Ernest: N. (1860-1940) IN the 1880's and early 1890's, Laidlay was the leading Scottish amateur, winning the British Amateur Championship in 1889 and 1891 and the Scottish vs. England Championship from 1902 to 1911, annually.

Landing Area: n. the ideal spot to land your ball on the fairway or anywhere so desired.

Lateral Hazard: n. A water hazard running approximately parallel to the line of play and defined by red stakes.

Lateral Shift Or Slide: n. Movement of the Body generally parallel to the Target Line. It can be in an AFT or FORWARD direction. Also known as a 'Slide or Sliding Motion'. In the correct amount at the right time in the overall Swinging Motion, this movement can be advantageous, but if not so, it can be the sign of bad things to come.

Launch Angle: n. The angle at which the ball comes off the Clubface immediately after 'Impact and Separation'.

Launch Clubface AIM: n. The initial 'Clubface Aim' relative to the 'Target line' or 'Pre-Selected Ball Flight Line'. 'Clubface Aim' is the primary determinative of 'Ball Flight Direction'.

Launch Clubhead PATH: n. The initial 'Clubhead Path' relative to the 'Target Line' or 'Body Line'. The 'Golf Club' must always be swung on the 'Body line' as any other 'Path or Motion' is 'Manipulation' and usually produces 'Adverse Spin Rates' and undesirable 'Resultant Ball Flights'.

Lay Off: v. To point the Club to the 'High Energy Side of the

Target Line' at the 'Top Of Back Swing'.

Lay Up: n. To deliberately hit a shot short of the green or hazard to avoid trouble and leave a more manageable approach shot with a Short Iron instead of, perhaps, a Long Iron, which is generally less accurate.

Leak: v. To fade undesirably to the 'Low-Energy Side of Target Line'.

Leg Drive: n. The powerful positive movement of the legs toward the Target during the Down, Out and Forward Swing. It will feel somewhat as though you would feel pushing an automobile with your front hip, body and hands placed firmly on the trunk with your feet pointing about 45 degrees toward the right side of the road.

Length: n. The distance the golf ball travels off the Clubface.

Level: n. Even to PAR.

Lever Assembly: n. Term for the 'Upper Body Components' including both Hands, Arms and the Shoulders. These are the 'Target and the Brace Levers' depending on which side of the Body the 'Components' are located. The 'Target Lever Assembly' (Target Side) also includes the actual Golf Club.

Lie: n. As it relates to the Ball, the relationship the Ball has to the Ground and the ground to 'Level Or Horizontal'. As it relates to the 'Clubhead', the relation of the 'Sole Of The Clubhead' to the 'Plumb or Vertical Shaft'. The angle of the 'Sole' to the 'Shaft'. That 'Lie Angle of the Wedges' is usually about 60 degrees.

Lie Angle: n. The angle the shaft makes or creates with the ground as measured from the mid point of the shaft. This physical feature applies to the manner by which the 'Sole Of The Clubhead' actually makes contact with the ground as a result of the originally described centre of shaft angle. The three lies are 'Normal', 'Flat or Upright' or 'Toe Down or Toe up' respectively.

Lift Clean & Place: v. The process of picking the golf ball off the ground, cleaning it and replacing it to the same place from which it originated. If the original place is unsuitable due to wet or mud, one has the opportunity to move the placement location a stipulated distance, usually one or two clublengths.

Line: n. The same term or synonymous with 'Target Line' meaning a 'Straight Path' from one location or object to another.

Line of Compression: n. A practical example is a 'Bullet Hole' through a baseball. Mechanically, it is the line through the centre of that area from which material flows when displaced by a compressing force. For Golf, it is the 'Direction of the Impact Force', as related to the various centrelines, for determining 'Ball Behaviour'.

Line Of Flight: n. The 'Straight Path' of the moving object. The actual line may not be perfectly straight.

Links: n. A term describing a 'Golf Course' built on 'Linksland' which was property reclaimed from the ocean or sea. This term has been broadly adopted to mean 'Golf Course' but it is much more specific than often used. A 'Links Course' must have certain characteristics to qualify as 'Linksy'.

Lob Shot: n. Similar to a 'Flop Shot' in that the ball flight is higher than it is long or far and lands generally very softly with or without back-spin.

Local Rules: n. IN addition to the 'Rules Of Golf', the head professional has the latitude to establish additional rules that shall be obeyed on a specific necessity. Any such rules must be clearly explained and visibly posted for all to see.

Loft: n. Term for the angle of the golf Clubface in relation to perpendicular with the ground. i.e., a pitching wedge with a 'Loft' of 48 degrees will have a Clubface that is tilted 48 degrees from straight up and down towards flat or level to the ground, or about half way from upright towards level or horizontal. The longer the irons the less the 'Loft'. i.e., a #2 Iron may have only about 17 degrees of tilt towards the ground depending on the standard used. The ball flight will be quite low to the ground with such a club.

Long Game: n. Term describing a players performance with his long clubs including all the Woods and the #1, #2, #3 or the long irons. The professional long game takes place at about 200 yards and beyond.

Long Irons: n. The long-shafted irons including the driving iron, the #1, #2 and #3 Irons. (sometimes the #4 Iron as well)

Lie of the Ball: n. Term describing the condition or manner by which the ball is 'Sitting on the Ground' or playing surface. Some possibilities are 'Uphill, Downhill, Side Hill' (ball above and below the player's Feet), 'Buried Lie' where the ball is below the surface, a 'Divot Lie' where the ball is sitting in a ground indentation, a 'Sitting-Up Lie' where the ball is nicely above the grass or ground surface, etc. The ball's being 'Teed-Up' is a specific type of 'Lie'.

Lie of the Clubhead (Upright & Flat): n. Term describing the physical clubhead characteristic of the position of the TOE of the Clubhead in relationship to the 'HEEL of the Clubhead', both in relationship to the centreline of the Shaft. When the Clubhead is properly 'Soled to the Ground' (held by the player) the TOE of the Clubhead should be slightly higher than the HEEL which is making contact with the ground. When it is raised off the ground more than specified, the Lie Condition is called 'TOE UP' (Upright). When it is the opposite, the Lie Condition is called 'TOE DOWN' (Flat).

Lift Clean & Place: v. Phrase involving the Ball's being 'Lifted from its ground resting place', 'Cleaned off' and 'Replaced' to either the 'marked' original location or an alternative location as provided by the Rules of Golf. This procedure may be applied when the course is very wet and or muddy for any reason which might render the conditions such as ball cleanliness hampering striking the ball effectively.

Line Drive: n. Term for a low trajectory ball flight, most often made from the teeing ground with a wood or long iron. But some players refer to a 'Skulled' wedge shot as a 'Line Drive' as well.

Line of Flight: n. The actual or anticipated Ball Flight Path.

Line of Sight: n. The straight line that one can see from the Ball Location to the Target or from one point to another. Visual Line.

Lip Out: n.v. The process of the ball's just grazing the edge of the cup, being redirected by the contact and failing to fall into the hole.

Lob: v. To deliberately play a high, soft-landing pitch shot usually over a hazard or a sand bunker, that often offers little or no landing area before the pin.

Loft: n. The measurement of the degree to which a clubface is set back from vertical, i.e. pointing more towards the heavens as the 'Loft' increases. The '60 degree Lob Wedge' will take the lights out above your head in the driving range stall.

Long Irons: n. Iron clubheads with minimal loft used when distance is required, as in the Long Game.

Loop: n. A round of golf. The shape of a swing. A swing quirk in which the player takes the clubhead back on one line, then reroutes it with a circular motion or Clubhead Path near the Top Of Backswing. The swing of Lee Trevino and Jim Furyk are classic examples. The 'Strap Of A Golf Bag', hence the term used to describe caddies as 'Loopers'.

Loose Impediments: n. Objects that are not fixed or growing on the course, and thus may be moved from near a ball without a penalty (except in a hazard).

Low Finish: n. A Follow Through that stops, deliberately or otherwise, shorter, lower or more abbreviated than normal, as in a 'Punch Shot'.

Looper: n. Term for a caddie.

Low Side: n. Part of the green below the hole, especially when the hole is cut on a slope. Opposite of 'High Side'. This term also refers or applies to the condition of the 'Fairway' or 'Tee Box'.

M

Mallet Putter: n. A putter head style with a semicircular profile or shape with the flat frontal surface being the face.

Marker: n. An object or two on the teeing ground to define the line behind which one strikes his tee shot. Also called a 'tee marker'. A coin or any small object used to mark the location of the Ball at Rest Location when it is being 'Picked, Cleaned and Replaced' before taking the putt. Also, in match play, someone

appointed to keep another player's score, particularly in an odd numbered field when the player would be teeing off alone or singly. This 'Marker' may even have to be a third party (not your Caddie) who is appointed to simply keep your score during the match.

Match: n. An event whereby two or more players compete via a stipulated set of rules to determine the other parties superiority while on the golf course.

Match Play: n. The original form of golf competition, where the winner is the player or team that wins the most individual holes. The match does not necessarily extend to 18 holes, i.e. if a player is four holes 'Up' or ahead with three holes left to play, he wins the match 4 & 3, four up with three to go. In this situation the trailing count cannot overtake the lead count. It's over.

Medal Play: n. A prize awarded to the player who scores the lowest in a stroke play format. Also v. to score the lowest in a stroke play qualifying tournament or series of rounds. Name for stroke play.

Mid Sized adj. describing generally the golf club head size as in Over Sized or standard cubed, meaning the regular sized steel heads with which you strike the ball.

Misread: v. To read a green incorrectly and, thus, to play the putting stroke on the wrong line causing one to miss the cup and fail to hole the ball.

Mashie: n. Term for a #5 Iron. The historic golf club appeared in the late 1880's and prove to be most useful.

Massy, Arnaud: N. Skilled golfer whose achievements included winning the 1907 British Open and participating in a British Open play-off in 1911 ultimately won by Harry Vardon.

Maxwell, Robert: N. British Amateur champion in 1903 and 1909.

Mid Irons: n. Term for the #4, #5 and #6 Irons whose shafts are about mid-length when compared to the #1 and the #9 irons. Some players include the #7 Iron in the category of 'Mid Irons'.

Mechanics: n. The overall study of the 'Components and Procedures' which make up the 'Golf Swing'. 'Physics and Mechanics' need to be learned before one can convert his golf knowledge to 'Geometry and FEEL'.

Middle Irons: n. The #5 Iron, #6 Iron, and #7 Iron make up the 'Middle Irons' of the complete set.

MOS: n. The 'Moment Of Separation' is the event millisecond during which the 'Golf Ball' separates from the AIMED Clubface. Also known as the 'Moment Of Restitution' during which the 'Squashed Golf Ball' regains or reassumes its 'Roundness'. (see 'Compression & Line Of Compression')

Mulligan: n. The procedure of electing to strike a second ball after a poor shot without counting it as an additional stroke. Under the 'Rules', this is the behaviour of a cheater. It is unacceptable when keeping score especially when competing with others in any manner. Also, the term for one's taking an extra shot without actually recording it on the scorecard as an additional stroke. Local rules may provide for such occurrences. The 'Rules' do not.

N

Nassau: n. A competition in which points are scored or awarded for winning the 'Front Nine', the 'Back Nine' and the overall eighteen holes in a match.

Net Effective Loft At Separation: n. 'Loft' is a factory or manufacturer provided 'Clubhead Configuration'. When you desire to get a 'Golf Ball' 'In The Air', this condition is generally or best accomplished by the 'Clubhead Loft'. The 'Wedges' have more 'Loft' than does a '#1 Iron, Driver or Putter' so the 'Trajectory' is naturally greater as well. 'Angle Of Attack' contributes to 'Trajectory'. If you want the Ball to go up, you must necessarily swing down to produce a compressed descending blow so that the 'Clubhead' can do the work it is designed to do. The 'Clubhead' transfers both 'Energy' and 'Behaviour' to the 'Golf Ball'.

Neuro-Muscular: n. the science or function of 'Nerve or Electrical Energy (Synapse) causing the 'Muscle Fibres' to contract and release. The science of 'Brain-Muscular Relationship'.

Neutral Grip: n. A grip placed on the club without any 'Preload' or 'Cocking of the Wrist and Hand Gun'.

Niblick: n. An early lofted iron, the niblick was roughly equivalent to a modern #9 Iron. With a heavy head and a wide face slanted at a greater angle than any other iron except a wedge, it was used for extricating, or 'howking' the ball from difficult lies or for lofting the ball over hazards. Somewhat a modern day #9 Iron.

Nineteenth Hole n. a colloquial term for the bar or lounge which is frequented after the eighteenth hole is completed.

Nassau: n. A three-part bet in which a point or wager is awarded for winning the front nine, the back nine, and the overall round.

O

O.B.: n. Abbreviated term for a ball's being struck 'Out of Bounds' in a round of golf. When a ball is 'O.B.', it has come to rest 'Outside the Playing Boundaries' and suffers appropriate 'Stroke and Distance Penalty'. 'O.B.' is actually considered to be outside the golf course's formal playing area. For example, the parking lot of your favourite or home course is 'O.B.' or outside the playing area. There is generally 'No Relief' from an 'O.B.' lie.

Obstruction: n. Anything artificial, whether erected, placed, or left on the course (deliberately or otherwise), except for markers defining course boundaries and cart paths.

Offset: adj. Describing a club with a bent neck or hozel so the Clubhead and Clubface is slightly behind the line of the shaft, designed to give the player an extra split-second to Square Up the Clubface to the Target Line Through Impact and Separation.

One-Piece Takeaway: n. The desired motion for the early portion of the backswing, with Hands, Wrists, Arms, Shoulders and Body moving away from the ball together.

One-Shotter: n. A Par three hole.

One Up: adj. In match play, describing a player or team that has won one more hole than has their opponent.

On the Beach: adj. phrase. Colloquial term for being in a sand trap or on the sand hazard, hence 'On the Beach'.

On the Table: adj. phrase. Colloquial term for being on the green as in 'On the Dance Floor'.

On the Dance Floor: adj. phrase. Colloquial term for being on the putting surface or green.

Open Clubface: n. A condition of the Clubface's not being 'Square To The Target Line or the Ball Flight Line', especially at the 'Moment Of Separation'.

Open Stance: n. When the Target Foot is farther away from the Foot Line than is the Brace Foot.

Ouimet, Francis: N. (1893-1967) Former caddie who, as a twenty-year-old American amateur, defeated Vardon and Ted Ray in a ply-off for the 1913 U.S. Open title, thus becoming the first amateur to win the event.

Out of Bounds: n. Outside the boundary of the golf course. A ball that lands 'O.B.' cannot be played and must be rehit with a penalty stroke.

Outside Agency: n. Any object not part of a match that stops, deflects or moves a ball while 'In Play'.

Outside To In: adj. Describes a Swing Path in which the Clubhead approaches the ball from the 'OUTSIDE' of Target Line and generally making contact moving to the 'Inside' and through. This Clubhead Path is Fade creating or inducing clockwise rotation on the ball about its 'X Axis' or the Vertical Axis.

Overclub: v. To hit with a club that produces too much distance for the situation.

Overlapping Grip: n. The most popular grip for players. It involves

placing the little finger of the Brace Hand in the space between either the Brace Ring Finger and the Target Index finger, or in between the Target Index Finger and the Target Middle Finger. Also called the 'Short and Long' Vardon Grip.

One Piece Takeaway: n. The desired 'Motion and Mechanics' for the initial 'Back Swing' or 'Take Away' move where the entire body; hands, arms, shoulders, torso, hips start 'Coiling or Loading' simultaneously. All these parts start moving away from the Ball at the same time. The 'Triangle Formed by the Two Hands and Arms (Levers) is maintained in the 'First Foot' or so. Of the 'Take-Away' Clubhead move.

Open: v. 1) Clubface: To turn or rotate the face toward the Brace or aft side of the Ball away from the Target. 2) Body: To 'Align' all or part of one's body to the 'DRAW - HOOK' side of the 'Target Line'. It is important to note that one's 'Shoulders' might be 'OPEN' while the 'Hips' may be less so and the 'Feet' may be 'SQUARE', or in the reverse. 3) Feet/Foot: SQUARE is when the longitudinal line (heel to toe) is at 90 degrees to the Target Line. OPEN is when, for example, the Target Foot is turned toward the Target or away from your 'Belly Button' or 'Belt Buckle'. 4) A tournament 'open' to amateurs and professionals.

Open to Closed: adj. The rolling of the Clubface open during the backswing then closed during the forward swing.

Out-of-Bounds: adj. phrase. Term describing the condition of one's ball being struck and coming to rest 'Outside the Defined Playing Boundaries of the Course' where appropriate penalties may apply.

Over Sized: adj. phrase. Colloquial term referring generally to Clubhead Size, meaning that the specific Clubhead referred to is larger than the Standard Size or Standard Cube displacement.

Over-Spin: n. The forward rotation of the Golf Ball about the Y or Horizontal Axis; the axis through the Equator.

Over-The-Top: adj. Referring to a swing that starts on an 'Outside-to-In Clubhead Path' as soon as the 'Downswing Movement' is initiated. The 'Brace Shoulder' immediately 'Rotates' about the 'Inclined Spinal PIVOT' (Spinal Crankshaft) due to 'Excessive Tension' in the 'Shoulders or Upper Body Machine'. This prevents the 'Lower Body Machine's LEADING' from the 'Top Down'.

Over the Top: v. The action of 'Casting' or throwing the Brace Shoulder strongly toward the Target Line in the early downswing or during Segment #1 and #2 causing the Clubhead Path to be 'Outside-In'.

P

Pace: n. An example is walking versus running or the miles per hour of a moving body. For Golf, it is the surface speed of the orbiting Clubhead as differentiated from Rhythm. (the Three Zones)

Paddle Grip: n. A condition of a 'Golf Grip' whereby there is a flat surface or area where the 'Thumbs or Fingers' might rest.

Par: n. Term referring to the number of strokes that the Golf Association or course regulating jurisdictional body deems as the number of stroke appropriate or needed to complete a hole from tee box to cup or hole.

Parallel: adj. & n. The desired Shaft position at the 'Top of the Backswing' with the Clubshaft's being parallel to the Ground. Also horizontal. The condition of the 'Target Line' in relationship to the 'Foot Line' for a 'Zero Spin Rate Ball'. (generally).

Parallel Tip: n. Sometimes called the 'Unitized Tip', this is a Shaft Term used to describe the golf shaft tip characteristic 'Width or Thickness' being uniform along the entire 'A-Flex' or first 8 to ten inches of the tip. The other variety is what is called the 'Tapered Tip' which means that the entire tip is getting progressively 'Wider or Thicker' as it moves closer to the middle or butt end of the shaft.

Park, Willie, Jr.: N. (1864-1925) A legendary putter who won the British Open in 1887 and 1889, Park also designed golf courses and was the inventor of golf clubs and a fifty-six-sided golf ball called 'the Park Royal'. He was the first professional to write a complete book on Golf, 'The Game of Golf'. (1896)

Path: n. The directional arc on which the club is swung.

Penalty Stroke: n. A stroke added to a player's score for a violation of a Rule or as punishment for hitting into a water hazard or Out-of-Bounds or losing a ball, or for an unplayable lie.

Pendulum Stroke: n. A golf Stroke or Swinging Motion that performs like or resembles the pure 'Back and Forth Motion of the Newtonian Pendulum' which remains 'On Line' until acted upon by an outside 'FORCE' or 'MOTION'. The 'Putting Stroke' is often beneficially 'Pendular' in its style and composition.

Piccolo Grip: n. A very loose grip or hold on the handle of the club, especially at the top of the backswing.

Pick Up: v. To swing the Clubhead away from the ball with a very sharp cocking of the wrists resulting in premature lifting of the club, rather than the more beneficial 'Sweeping Away' action employed by good players. A similar term calls this move the 'Pick Up Inside take Away'.

Pin: n. Rigid stick or shaft and tip or 'Pin End' that sticks into the Cup and having a flag on top in order to locate and define the position of the Hole.

Pin High: adj. Referring to the ball's being struck far enough to have reached the distance of the Target even if it is off line.

Pin Placement: n. The positioning of the hole on the green on any given day or occasion. The 'Pin Placement', depending on the amount of play the putting surface receives, is usually changed every day or two.

Pick Up: n.v. The process of 'Taking the Ball into one's hand and lifting it off the ground or putting surface'. This can take place when, in match play, the other team or the opponents 'Concede the Hole' thus causing the 'Hole to be Completed' making the removal of your ball necessary, not unlike its having been actually 'holed'.

Pinch Shot: n. A shot usually around the green or fringe of the 'Putting Surface' that employs a nice crisp 'Pinching or Down Force Action' that is created by the 'Brace Lever Extensor Action'.

Pistol Grip: n. A grip that is usually used for 'Putters' that is 'Built Up' or bigger in diameter under the Butt End'. This out of round shape tends to assist the player to 'FEEL' 'Clubface Square-

ness' and to know where the 'Top Of The Grip' is located. When you know this you know where the 'Clubface is AIMED'. Better 'Ball Control' should result.

Pitch: n. A short shot with a steep trajectory, (typically with backspin), that flies in the air farther than it rolls after landing.

Pitch & Run: n. An approach shot consisting of a low, short pitch shot that lands on the green, then rolls a long way.

Pivot: n. as in the revolving door, the 'Motion of a Body' moving around a 'Centre Point or Axis'. In Golf, a multiple universal-joint assembly between the Stationary Head and the Stationary Feet holding the Clubshaft 'On-Plane' by positioning and adjusting the 'Lever Assembly', via the '#3 Accumulator', as directed by the 'Brace Forearm'.

Pivot Pressure: n. When the 'Pivot' ('Lower Body Machine') 'Loads, Coils or Winds' in orderot 'Accummulate, Load, and Store Potential Energy', this process enables the 'Reverse Process' ('Delivery & Release') to apply 'Rotational Pressure' to the 'Golf Club Handle' through the 'Body Machine' for the purpose of doing 'Work' (Force Through a Distance') which is moving the 'Golf Ball'.

Plane: n. An imaginary flat surface that that describes the path and angle of a 'Swinging Clubhead and Shaft'. Also the 'Swing Plane'.

Play It As It Lies: n. Under the 'Rules Of Golf' you are obligated to play your ball from precisely where it comes to rest during play. Any alternatives to this rule are very carefully explained and defined.

Play Off: n. A tiebreaker in which the players continue play after the regulation number of holes to break the tie. Sometimes in a sudden death format and otherwise by playing a stipulated number of specified holes, the lowest score over which wins.

Play Through: v. To pass through or bypass golfers ahead, giving faster players the chance to continue at a quick pace of play.

Plugged Lie: n. A ball that is partially buried beneath the surface. Also 'embedded lie'.

Plumb Bob: v. The act of lining up a putt by sighting along the shaft of a putter hanging vertically in front of the player's face. This process assist in your seeing the line or the break of the putt.

Poa Annua: n. A weed-like grass found on many courses in the cooler spring months before its dying out in the summer heat.

Point of Contact: n. The spot on the Clubface that strikes the backside of the ball.

Pop Up: n. v. The process of striking a ball much higher off the Clubface than desired or anticipated. It is similar to the occasion of 'Popping Up a Baseball to the Infield'. This is a swing or execution fault.

Pot Bunker: n. A small, deep sand trap, often invisible from the teeing ground.

Potential & Kinetic Energy: n. as in a drop-hammer, 'Potential Energy is the Energy of Position' while 'Kinetic Energy is Energy in MOTION'. In Golf, loaded Accumulators are 'Potential Energy' (Static) while the 'Orbiting Clubhead' is 'Kinetic Energy' (Dynamic).

Power: n. The amount of force with which the ball is struck.

POWER Accumulators: n. 'Power Accumulation is Potential or Stored ENERGY' as opposed to 'Kinetic or Active ENERGY'. Potential is 'Passive or Static, while Kinetic is 'Active or Dynamic, 'In MOTION'. From a 'Physical Component Perspective', there are 'Four POWER Accumulators'. They are; 1)the 'Bent Brace Arm or Lever, 2)the 'Cocked Target Wrist', 3)the 'Angle formed between the Clubshaft Target Forearm' and 4)the 'Angle formed by the Target Arm to the Target Shoulder and Chest'. You can see that these 'Conditions' represent or create 'Potential Energy Release Conditions'. If you 'Cock Your Wrist' (holding a hammer) when you 'Un-Cock' it, you can drive a nail. Your Body 'Accumulates Energy' so that it can dispense it at will or at a specific time in a 'MOTION or Action'.

POWER Package: n. This the 'Golfing Machines Potential ENERGY'. It is stored, until time of 'Release' in the 'Four Accumulators' which are 1) the 'Bent Brace Elbow', 3) the 'Cocked Target Wrist', 3) the 'Turning and Rolling Target Forearm and Wrist' and 4) the

'Loaded Target Bicep Pressed' tightly against a 'Resistive Target Chest' until the 'PIVOT' forces this 'Contact' to cease. Just after the 'Maximum Clubhead Speed' is accomplished, the Pressure (#4 Pressure Point) is 'Released' and the Target Bicep moves away from the Chest toward the Target. Also called 'PIVOT Release', which takes place when the 'Brace Leg Drive' is terminated or completed thus allowing the 'Target Lever Assembly' (Upper Body Machine, Hands, Arms and Clubhead) to pass the 'Hips' (Lower Body Machine). Somewhat like 'Power Off and Coasting to a Stop'.

POWER Package Delivery: n. Refers to the basic requirements for transporting the 'POWER Package Assembly' (Lower and Upper Body Machine including the Golf Club), intact, to the 'Release Point'.

Practice Aids: n. Devices such as videos, swing trainers, special clubs, designed to make practice more worthwhile and productive.

Practice Range: n. A place designed for practising your full variety of 'Golf Shots' in as close to real situations as possible. Some exceptional facilities with players in mind, even provide full practice holes usually for 'Fairway Bunker Work', 'Short Game' and 'Specialty Shots'.

Preferred Lie: n. The spot to which the ball is moved, when the Rules allow such as in 'Winter Rules'.

Pre-Shot Routine: n. A physical and mental routine or procedure followed before actually striking the ball. This promotes consistency.

Press: n. or v. A form of wager or the process of 'Striking The Ball' with more authority than usual to accomplish the shot.

Pressure Points: n. There are 'Four Pressure Points' that are directly related to the 'Four POWER Accumulators'. These 'Pressure Points' are; 1) 'Heel of the Brace Hand' where it makes contact with the Target Hand Thumb or the Club Shaft depending on the Grip, 2) 'Last Three Smaller Fingers of the Target Hand' holding onto the Club Shaft', 3) 'First Joint or Middle Digit of the Brace Index Finger where it comes into contact with the Club Shaft' and 4) where the Target Bicep makes contact with the Target Side of the Thorax and Abdomen, the Chest. Simply put, these 'Pressure Points' apply aggregate FORCE to the Golf Club at the upper end of the Shaft via the Grip.

Private Lesson: n. A 'One on One Golf Lesson'

Pronation: n. Inward rotation of the wrist; at address, toward the target with the Brace Hand and away from the Target with the Target Hand.

Pro-Side: n. On a sloping green, this is the uphill or high-side of the cup which give the player the potential of 'Falling' into the cup. When one ends up on the 'Low-Side', there is no hope of holing out. This is why it is called the 'Pro-Side' or not.

Provisional Ball: n. A ball played when there is the possibility that the original shot may be lost or out of play.

Pull: v. A ball Flight that starts to the High-Energy Side of the Target Line and continues to travel that line.

Pulled Shot: n. A relatively straight (not curving) Ball Flight that starts to the 'High Energy Side Of The Target Line' and does not come back to centre.

Pull Hook: n. A 'Ball Flight' that starts to the 'High-Energy Side of Target Line' and then curves farther in that direction.

Pull Slice: n. A 'Ball Flight' that starts to the 'High-Energy Side of Target Line' and then curves back towards the Line and to the 'Low-Energy Side of Target Line'.

Punch Shot: n. A hard, low-flying shot often hit with a good deal of backspin. Also a 'knockdown shot'.

Punch Bowl: n. A green that sits in a hollow.

Push: n. v. The process of moving the ball directly, in a straight line, to the 'Low-Energy Side of the Target Line', usually the result of an 'Open and/or Square Clubface AIM' with an 'Inside-Out Clubhead Path'.

Push Hook: n. A shot that starts to the Low-Energy Side of Target Line and then Curves back towards the Line.

Push Slice: n. A shot that starts to the Low-Energy Side of Target Line and then curves farther to that Low-Energy Side.

Pull: n. v. The process of 'Pulling' the Clubhead through 'Impact Zone' towards the 'High-Energy Side of Target Line', resulting in the Arm and Elbow Motion called 'Round-Housing'. Where the player's 'Target Elbow' tracks far too closely to the 'Target Hip' drawing the 'Target Lever Assembly' (Hand, Arm & Shoulder) around the body instead of considerably away from the body 'Towards the Target or Down the Line'.

Punch Shot: n. Term for the Brace Hand and Arm's giving the Ball a 'Punch' through Impact generally keeping the Hands and Swing (and thus the Clubhead) quite low to the ground creating reduced or decreased 'Loft' and producing Ball Flight with reduced trajectory of height. Punch shots are usually Low and Running.

Place: v. The process of 'placing or putting' a ball on the ground or on a tee.

Plane: n. An imaginary flat surface that describes the 'Angle of a Swinging Club' as it relates to your 'Spine Angle or Spinal Tilt'. Also called 'Swing Plane'. When one stands at 'Address' with your driver in both hand and the Clubhead sitting on the ground (Grounded), the angle your Arms make to your chest (Spine) is greater than the angle made when holding a #9 iron. Your hands and elbows are closer to your crotch with a #9 iron than with a driver. Picture the 'Tether Ball Slinging Centrifugally around the Tether Pole while changing the Tilt Of The Pole'. This 'Tilting of the Pivot' will alter the 'Plane of the Circling Ball at the End of the Rope'. The 'Blades of the Rotor System of a Helicopter' also 'Tilt and Change Plane' to direct the 'Motion' the airship.

Plugged Shot: n. Term for the golf ball's being 'imbedded' in soft usually wet ground or other soft material including the sand in a bunker.

POWER Package: n. The 'POWER Package' concept isolates and defines the functions of the Hands and Arms in propelling the Clubhead into IMPACT. The 'Lever Assemblies' contain the 'Four POWER Accumulators', the 'Four Pressure Points', their 'Loading' and the 'Clubhead LAG'. There is no 'Stroke' in Golf which does NOT include a 'POWER Package Assembly' and the 'Five Step Sequence' of their operation, 1) Accumulation, 2) Load, 3) Storage, 4) Delivery and 5) Release.

POWER Package Assembly: n. The 'POWER Package' is basically a

'Triangle' governed by the 'Law of the Triangle'. The 'Straight Target Primary Lever (Arm)' forms one side. The 'Shoulders' form the second side. The 'Line from the Brace Shoulder to the Brace Hand and Target Hand' forms the 'Third Side or Leg', regardless of whether this 'Brace Lever' is 'Straight - IN LINE or 'Bent''. The 'Shape' of this 'Third Side of the POWER Package Assembly' can only properly be changed by the Brace or Third Side. It is the 'Variable Leg' while the other two are the 'Constant Legs'. It should be noted the 'Optimal Shape' of the 'First Side' is 'IN LINE or Straight and Extended' best accomplished with a 'Soft or Relaxed Target Elbow'.

Primary Lever Assembly: n. The Upper Body Machine Components, Target Upper Arm, Elbow, Forearm, Wrist and Hand.

Putter: n. A club designed for putting, usually having an upright face or very close to it.

Putt Out: v. To stroke the ball into the hole, To finish the hole

Q

Quick: adj. Describing a swing that has too little 'Duration' or takes too little time to complete a normal effective full swing or the selected swing pattern. This 'quickness' takes place generally as a result of the player's having NOT completed his 'Back Swing' and thus having 'Started the Forward Swing' prematurely and usually out of sequence and Rhythm with the entire body.

Quarter Shot: n. A shot hit with approximately 25% of normal power.

Quartering Headwind: n. A breeze that is blowing across your Target Line, right or left, and slightly into your face so that it will shorten your Ball Flight Distance.

Quartering Tailwind: n. A breeze that is blowing across your 'Target Line', right or left, and slightly from back to front so that it will assist your 'Ball Flight Distance'.

Quit: v. To give up on a shot while hitting it. To decelerate

through Impact of a shot.

R

RSSR: n. 'Recommended Swing Speed Range' is a term developed by shaft manufacturers to assist club makers in finding or categorizing players shaft resistance needs based generally on 'Clubhead Speed'.

Radius: n. The 'Distance' between the 'Centre of the Swing Arc' and the 'Outside of the Circle'. The 'Target Lever Assembly Swing Radius' is anchored to the 'Target Shoulder', or 'Pivots from this point to the Sole of the Clubhead'.

Range Balls: n. Golf Balls specifically made for a very large number of strikes before being spent or used up. They tend to have much harder covers and should, therefore, not be used for 'Putting and Chipping Practice' where 'FEEL' is so pre-eminent.

Range Of Motion ('ROM'): n. The Distance and Direction through which 'Motion' acts.

Ray, Edward: N. 'Ted' (1877-1970) One of the longest hitters of his day, Ray won the U.S. Open in 1912 and 1920. He joined Vardon for an exhibition tour in America in 1913 that was very popular.

Read or Reading: v. To determine the Direction and Distance (speed & weight) necessary to stroke a putt into the hole. To survey the green to determine its slope and pace idiosyncrasies. Also 'reading the green'.

Ready Golf: n. This term refers to a discipline or type of golf sequencing where a foursome might not follow the 'Away Rule' and simply each player strikes his ball as soon as ready to do so. This procedure is designed to speed up play and does so very effectively.

Recover: v. To play back to the fairway or other safe spot from the rough, a hazard or other undesirable position. Also a 'Recovery

'Shot' is the result of making a recovery or fixing a problem that has arisen over the due course of a hole.

Release: v. To 'Spend or Dissipate the ENERGY stored in the 'Golfing Machine's' 'Four POWER Accumulators' via the 'Four Pressure Points'. To un-cock the wrists and rotate the forearms in the downswing (un-cocking the elbows and shoulders as well) so as to 'Square' the Clubface and Create POWER is a prime example. 'Release' can be considered to be a 'Continuing ACTION' which includes 'IMPACT and Follow Through'. 'Release is the Application of Stored or Potential ENERGY'.

Release Differences: n. These are 'Down Stroke Variations'. The two types are 'Automatic and Non-Automatic'. The 'Non-Automatic' involves a deliberate muscular manipulation. The 'Automatic' is 'Triggered Mechanically' and drives the Hands to their IMPACT location which is the 'Visual Reference Point' accomplished, of course, by 'Seeing the Ball'. (V.R.B.P. #1)

Relief: n. When a player is allowed to lift and drop the ball without penalty.

Reverse C: adj. Describes the position in which the back and legs are arched curved backwards at the finish of the swing.

Reverse Overlap: n. A putting grip in which the index finger of the Target Hand overlaps the little finger of the Brace Hand.

Reverse Pivot: n. A motion in which the body's weight stays on the front side during the backswing, then shifts to the backside on the downswing; the opposite of the proper beneficial Turning Action. Also the 'Reverse Weight Shift'.

Restitution: n. The condition or process of the squeezed, squashed or compressed golf ball's returning to its original round shape. Energy is required to compress the ball and, thus, energy is released during its returning to the original shape. This is not too unlike the process of freezing and melting ice. The freezer has to take away heat in the cooling stage and replace it in the melting state, as is the case when the water evaporates.

Rhythm: n. Crankshaft and connecting rods are examples of mechanical 'Rhythm' in which we hold all components of a rotating motion to the same 'RPM'. In Golf, it is the holding of both Lever Assemblies to the same basic 'RPM' through the Stroke while

matching all other 'Body Components' at a steady, even rate. The 'Tempo' of the Golf Swing. Similar to musical 'Rhythm', think of a military march with fifty soldiers covering hundreds of yards 'Chanting' 'Left, Right, Left, Right' or reciting in chorus some private verse you would not tell mother! Rhythm has balanced 'Units Of Time' and a smooth repetitiveness about it. The 'Golf Swing' must as well or your parts will get all out of step and the Ball will be off doing its own thing! As simple as I can put it? Your heart has 'Rhythm'. You know, the 'Bumpity Bump'. If it were 'Bump Bump', it would still have 'Rhythm' but no 'Cadence'. The 'ITY' is the 'Cadence'. My conservatory music teachers may read this and I could disappear in the middle of the night! If so, "I'll miss you all, you hear!"

Roll Over: v. To rotate the wrists and arms during the swing, especially through the Impact Zone.

Rough: n. Term for long or longer grass at the edge of the fairway than exists in the fairway. There can be 'Rough' around the green as well.

Royal And Ancient Golf Club of St. Andrews: n. Also known as the 'R & A', this is the British Home and perhaps modern origin of the game where the organization of the game takes place. The rules are made by a selected group in the 'R & A'. In North America, the comparable body is called the 'U.S.G.A.' or the 'United Sates Golf Association'.

Rub Of The Green: n. phrase. Golf term meaning that you take what your get and play the ball where it lies. It is quite similar to 'Lady Luck' of lack of her! Any misfortune, such as a bad bounce or other unintended result.

Run: n. the condition of a golf ball's rolling such as a bowling ball rolls, along the course surface. The ball would not roll in the rough or soft sand. Run is assisted or influenced by the surface condition. The opposite to 'Run' might be 'Ball Flight' or 'Air Time'.

Rye Grass: n. A cool-season grass that dies in intense heat; similar to *Poa Annua*. Often used to over-seed Bermuda grass fairways in winter to provide a healthier-looking surface.

S

Sandbagger: n. A golfer who lies about his playing ability in order to gain an advantage, particularly when betting.

Sand Saves: n. When your approach shot misses the green and lands in a bunker or sand trap, one must extricate the ball from this location onto the green, whereby it can be 'Putted Into The Cup' to complete the hole. When one successfully completes the hole with a Par score after being in the 'Sand Trap or Bunker', it is called a 'Sand Save'.

Sand Trap: n. Ground depression on the golf course filled with sand. Same as a 'bunker'.

Sandy: n. Colloquial term for gaining a Par after having struck a ball into a sand trap. Also a 'sand save'.

Sack n. a term for the golf bag.

Scalped adj. Describing a green or putting surface that has been cut or mowed exceedingly short, almost bald. To make the speed of the putts or rolling balls very fast.

Sclaff: v. To hit the ground unintentionally before the ball, resulting in a miss-hit.

Scoop: v. To attempt to lift the ball by dipping the Clubhead through Impact Zone.

Scoring Clubs: n. Generally the 'Short Irons and Putter'.

Scramble: v. To play erratic golf, yet still be able to score well by making good recovery shots or saves. Also a team play format in which each player hits his drive, the best of which is chosen and then each player strikes his next ball from within one club length of this best located drive point. The best of these are chosen, and so on until one player sinks a putt to conclude the hole. This format allows four players to score the best of the best shots sometimes for very low round totals.

Scratch Golfer: n. phrase. Term for a golfer who can play the full 18 hole round of golf in the number of strokes prescribed as Par.

This player is said to be playing to a 'Zero Handicap' or 'Playing the Course Even'.

Scuff: v. To miss-hit the ball and in the process of doing so, to damage its cover slightly with a dent or a smile or cut in the cover causing it to be retired.

See It: v. See the Ball Come Off the Clubface.

Separation: n. The point or condition of the compressed or squeezed golf ball's leaving the Clubface.

Set-Up: n. To position oneself to hit the ball. Also called 'Address'.

Shaft: n. The long, thin part of the golf club that connects the head to the handle or grip.

Shaft Flex: n. The bending moment or characteristic motion or action that occurs in the tip and body of the 'Golf Shaft' during the 'Entire Back & Up and Down & Out Front Swing'. This is caused by 'Loading' and 'Applied Torque'. Sometimes called the 'Bending Moment'. Shafts come in various 'Flexes or Stiffness' which mean one can utilize various degrees or 'Resistance To Loading', which directly affects 'Un-Loading or Deliver' of 'Power and Energy'.

Shallow: adj. Refers to a flat swing plane or Angle of Attack.

Shank: v. To strike the ball with the hosel of the clubhead, causing it to fly dramatically right or left and short. Not a desirable event.

Shape: v. To move the ball deliberately from one direction to the other while in flight; to purposely hit a fade-slice or draw-hook.

Short Game: n. Shots played on and around the green, including pitching and chipping, sand game and putting. Where the money is made.

Short Irons: n. Term or category for irons with short shafts and more loft, including the #7, #8, #9 and the Wedges. These are used in playing the 'Short Game'.

Shot: n. Colloquial term for taking a stroke and striking the ball.

Shut: adj. Describing the Clubface when it is tilted forward relative to the 'Target Line or Line of Play'. Also 'Hooded' which may mean not only Shut but turned or Closed towards the High-Energy Side of the Target Line.

Side Hill: adj. Situated on the side of a hill, especially a putt that breaks over the slope on its way to the cup. Chipping and pitching often involve side hill lies.

Side Wind: A wind force that is NOT either directly down the 'Headwind or Tailwind Line', which is parallel to the 'Target Line' or 'Ball Flight Line'. The varieties are 'Quartering Head or Tail winds'. (see 'Oblique')

Single: n. A match between two players.

Sink: v. To hole a putt.

Sitting Down: adj. phrase. Term for a golf ball's sitting or being nestled in the grass below the general level of the overall playing area. The ball will be slightly below the top of the grass. The ball will have 'come to rest' below the top of the grass or below ground level.

Skins: n. A betting game in which the lowest score on the hole wins the wager for that hole; if any players tie, the bet carries over or accumulates to the next hole.

Skull: v. To hit the ball above its equator with the leading edge of the clubhead; to top a ball.

Sky Rocket or Sky Ball: n. Colloquial term for a tee shot that is much higher than normal or expected.

Sky Ball: n. A ball that has, for various reasons, been 'Popped Up' with a 'Steep Angle Of Attack or Climb'.

Slice: n. A ball flight that curves significantly to the 'Low Energy Side Of The Target Line'. It may start out to the 'High Energy Side' and curve back to the 'Low Energy Side'.

Slog - Slogging: gerund. Cricket term that refers to the hard-hitting antics of a baseman; the act of over-swinging at the ball, trying to hit it as hard and far as possible. Put a 'u' in place of the 'o' and you get a modern day term 'Slug - Slugging', which is

pretty much synonymous.

Slope: n. Tilt of the green or fairway. A measurement of the difficulty of a golf course, used to compute a player's 'handicap' for that course.

Smother: v. To hit down on the ball with a closed clubface so it runs along the ground as a grounder, usually with hook spin.

Snake: v. A very long putt, usually one that breaks several times in different directions.

Snipe: n. A snap or smother hook.

Snowman: n. When you make a score of 8 on any hole, it is called a 'Snowman' due to the resemblance of an '8' to a 'Snowman'.

Socket: n. The hozel of an iron clubhead where the shaft joins the clubhead.

Soft Spikes: n. Term for cleats or traction devices affixed to the bottom of golf shoes that are NOT made of sharp, pointed steel as traditional spikes are manufactured. It is thought that this style of traction devices reduces wear and tear to the putting surface. The jury is still out. But it has been a huge marketing success with the commensurate profits that generally accompany such efforts.

Sole: n. 'TOOL' Term. The bottom of the clubhead where it makes contact with the ground. To set the clubhead on the ground at address.

Sole Weighted: adj. Describing the condition of a Golf Club's having 'Weight Added' or being 'Weighted' on the 'Sole' or bottom of the Clubhead. This process is usually done to lower the 'Centre Of Gravity' (COG) in order to get the 'MASS' below the centre of the Ball. This condition is very useful in getting the Ball air-born and transferring Momentum. (MIV)

Solid Perfect: adj. phrase. Colloquial term for a great strike of the ball.

Splash Shot: v. To explode the ball from the sand bunker or deep rough.

Spoon: n. Traditional name for a lofted fairway wood, equivalent to our III Woods of today, having about 14 to 16 degrees of loft.

Spot Putting: gerund. The act of aiming a putt toward a mark or discolouration in the green or some other intermediate target.

Square: v. To tie a match. Adj. Referring to the position of the body's Stance or Feet Axis such as being parallel to the Target Line. Referring to the position of the Clubface when perpendicular to the Target Line.

Stab: v. To hit a putt half-heartedly and without a sound stroking motion necessary to be consistently successful.

Staging Your Swing: n. The function of accomplishing certain 'Range Of Motion' ('Procedure') with your 'Golf Body Machine' for the purpose of 'Doing Golf Work'. There are 'Three Stages' of 'Procedures' 1) No Wrist Cock and No Pivot ('Putting & Chipping'), 2) Wrist Cock But No Pivot ('Long Chips & Short Pitches') and 3) Wrist Cock and Pivot ('Leg Driven Swings including the Full Swing') applied to the 'Ball' via the 'Golf Club' ('Components').

Stance: n. The position of the feet at Address or Impact FIX

Starter: n. The person who verifies your being rightfully intending to play a round of golf and, thereafter, sequences you to actually start the round. He usually coordinates very closely with the pro-shop and course marshals.

Stationary Head: n. as in a spinning skater or high tower diver, the 'Head Is The Pivot Centre'. In Golf, the 'Pivot Centre' is quite 'Sternal'. The 'Top Of The Spinal Crankshaft' (see 'The Human Tether Ball Pole') is stabilized by the 'Dynamic Eyes' while the 'Base Of The Tether Ball Pole' is stabilized by the 'Loaded Quads & Glutes' (see 'A Little Sit Down'). The 'Stationery Head' is a 'Basic Essential'.

Steering: gerund, as in guiding a rolling hoop, it is mechanically the forcing of a hinge pin to give a straight line motion to its attachments. In Golf, it is the holding of the Clubhead Path and the Clubface, square with the Target Line during Release and/or Impact, generally with negative results. It is sometimes called 'Holding On' to the Clubhead or simply 'Holding On'. An exaggerated attempt to control the direction of a shot (Ball Flight) by Hand Manipulation.

Stick: n. The flagstick. Colloquial term for a golf club. To play a shot that 'Sticks' right beside the hole.

Stiff: adj. Colloquial term for a ball's having been struck very close to the Pin, Cup or Hole.

Stonie: adj. Colloquial term for a ball's having been struck very close to the Pin, Cup or Hole.

Stroke: n. Specific term for the motion or action of one's having made a swinging motion of a Golf Clubhead at and through a Golf Ball.

Stroke Play: n. Competition in which the total number of strokes in an entire round or rounds determines the winner. The lowest total number of strokes prevails.

Strong Grip - Weak Grip: n. A grip on the club in which the hands are placed or rotated 'away' from the Target at Address so they will 'close' the Clubface more strongly through IMPACT. This 'Strong-ness' is almost as though one is cocking or loading the spring in a 'Cork firing Pistol'. If the spring is not loaded, it cannot fire. See one or more knuckles in the Target or Swing Hand. The more knuckles you see, the 'Stronger' the grip, the more loaded or cocked is the wrist.

Stymied: adj. Colloquial term for one's NOT being able to strike the Golf Ball where it has come to rest or where it lies.

Summer Rules: n. The ordinary playing of golf by the stipulated Rules, playing as the ball lies.

Supination: n. Outward rotation of the wrist; at address away from the Target with the Brace Hand and towards the Target with the Target with the Target Hand. The natural rotation of the wrists through Impact Zone and the entire swing.

Sway: v. To move the weight (sliding without Rotation) to the back side or aft on the back swing. To also do the opposite on the front swing. This forward motion without Rotation is the distinct 'Slide'.

Sweet Spot: n. The surface point on a Clubface where the Energy transfer from Clubhead to Ball is optimal. This is generally and

scientifically the surface point closest to the 'Centre of Mass' which may be under the surface or internal to the Clubhead. Also, that spot on the Clubface through which a plumb-bob line would pass if suspended from the butt of the grip.

Swing: n. Specific term for the motion or action of one's having made a swinging motion of a Golf Clubhead at and through a Golf Ball. A pendular Newtonic Motion.

Swing Arc: n. The Clubhead Path created or traced by the Clubhead during the swing.

Swinger: n. As opposed to being a 'Hitter'. The 'Swinger' generates the majority of the 'Power and Clubhead Speed' via 'PIVOT or Rotation' and not via the 'Delayed Brace Lever Action' which is the key trait of the 'Hitter'.

Swing Centre: n. The point around which the swing rotates, located roughly between the base of the neck and the top of the spine. It can be effectively FELT to be around the Sternal Hub, centre point between the Shoulders on the front Chest.

Swing Plane: n. The PLANE.

Swinging Motion: n. phrase. Motion of the Clubhead, the Golf Club, and the Human Body, during a Golf Swing.

Swing Path: n. phrase synonymous to 'Clubhead Path'.

Swing Plane: n. Term related to the 'Plane Line', which in Golf is a line inscribed on the surface of the 'Inclined Plane' passing through the Ball Location to serve as its 'Base Line' and its Centre of Rotation when changing its angle. Ben Hogan's 'Five Fundamentals of Golf' illustrates this concept of the 'Swing Plane' as a plane of glass with a hole in the middle through which the golfer stuck his head until the pane rested on the golfer's shoulders. In general, the Clubhead, and Clubshaft 'TRACK' or slide on this glass surface throughout the entire Back and Front Swings. This is called 'Being On Plane'.

Swing Radius: n. Term as in drawing a circle with a compass or a pencil attached to a length of string anchored to a pivot point or central turning point called a centre or Hub. In golf the Hub is the Swing or Target Shoulder Socket, the String is the Primary Lever or Arm and Hand, connected to the Secondary Lever which is

the actual Golf Club and the Clubhead is the 'Pencil'. The Target Arm or Lever's job is to maintain 'Swing Radius' or 'Extension' throughout the entire swinging motion. So the 'Swing Radius' is the Distance from the player's Shoulder Socket to the Sole of the Golf Clubhead or, perhaps the Sweet Spot of the Clubface.

Swing Weight: n. Term for the physical balance of a Golf Club. The swing weight calibration or scale is arbitrary (not in pounds and ounces, kilograms or grams) and gives the client information about the 'Pull Down Moment' of the Clubhead when applied to the Shaft Tip being held horizontal to level and to the grip end or butt of the shaft. If one were to double the head weight, the Swing Weight would markedly increase.

Skulled: adj. past participle. Colloquial term for the golf ball's being struck very thin (clubhead leading edge above the south pole) or almost topped (clubhead leading edge making contact with the ball above the equatorial centreline).

Slice: n. v. Term for the clubface making contact with the ball in a Face OPEN AIM with an 'Outside-In' Clubhead Path which produces a 'Glancing Blow or Cutting action on the Ball) which induces a 'Spin Rate' causing a markedly curved Ball Flight from point of Impact to the Low-Energy Side of the Target Line.

Slope Rating: n. A method of rating various courses difficulties based on specific criteria. In this manner players know which course is the mechanically most difficult or how one relates to another. Slope rating combined with, or adjusted for the player's handicap produces a 'Playing Index' for the player so that worldwide players can have some idea of their comparable playing performance.

Spin Rate: n. Term for the Rotational Velocity or R.P.M. of an object around an axis. In a Golf Ball, there is spin rate about the Vertical (X) and the Horizontal (Y) Axes. Spin rate induces curvature in ball flight and the 'bite' of the ball when it makes contact with the grass on the green or fairway. When a ball 'Backs Up' on the green, this action is due to 'Under-Spin' about the ball's Y Axis.

Sweet Spot: n. Colloquial term for the location on the Clubface that most effectively or optimally delivers / transfers energy from the Clubhead to the Ball during Impact. The 'Centre of Mass' is generally this physical location, except that the 'Centre of Mass'

is seldom on the surface of the three-dimensional object.

Symmetry: n. The uniform, balanced and even nature of motion. In Golf, with very advanced equipment and knowledge, a technician can observe the motion of the oscillating Clubhead attached to a vibrating shaft and determine the quality of the shaft and its actual performance under specific conditions.

Shoulder Cock (1st lever in the articulating arm): n. The cocking or un-cocking of the shoulder in the back or forward swing.

Short Game: n. Term for the all the shots and game taking place generally inside the players 'Pitching Wedge Distance'. This includes the putting stroke.

Single Action: n. Especially the smooth progressive simultaneous un-cocking of all three of the 'LEVERS' (shoulder, elbow and wrist), especially on the Brace Side, in the forward swing, such that it might be perceived as a smooth 'Single Action', not disjointed.

T

Tailwind: n. A breeze that blows in the same direction as the shot, helping it to fly farther.

Tait, Lieutenant F.G. 'Freddie': N. (1870-1900) Scottish amateur who won the British Amateur Championship in 1896 and 1898, A member of the Royal and Ancient Club, was killed leading his men into battle in the Boer War at Koodoosberg Drift.

Takeaway: n. The first twelve to eighteen inches of the backswing.

Tap-In: n. To hole a very short putt. A very short putt as in a 'Gimmie'.

Target Lever Assembly: n. The 'Upper Body Machine Components' on the 'Target Side' including the 'Target Shoulder Socket, Upper Arm. Elbow, Forearm, Wrist, Hand and Golf Club'.

Target Line: n. The imaginary line running from the very centre of the ball to the very centre of the Target, which may or may not be the cup.

Taylor, John Henry: N. (1871-1963) The first golfer from the legendary triumvirate of Vardon, Braid and Taylor, to come to prominence in the late nineteenth and early twentieth centuries. Taylor won the British Open five times.

Tee Or Tee Box: n. A small wooden peg with a flat cupped top on which the ball is placed for the purpose of striking it off the teeing ground. Also as in the 'Teeing Ground' or 'Tee Box'.

Teeing Ground: n. Term for the area between the Tee Boxes or blocks and up to two club lengths aft or farther from the hole. Location on course where one commences each separate hole's play.

Tee Box: n. Term for the area between the Tee Boxes or blocks and up to two club lengths aft or farther from the hole. Location on course where one commences each separate hole's play.

Tee Off: v. To play away from the tee box.

Tee Shot: n. The shot you hit from the teeing ground from any hole.

Tee Time: n. The time at which you are supposed to make your first strike off the #1 or first teeing ground. You can be penalized or disqualified if you are tardy!

Teed Up: adj. phrase. The process or condition of one's having placed the golf ball on a tee or device for purposely elevating the ball for a better advantage of striking it. (see 'Lie')

Tempo: n. The rhythm and timing of the golf swing. Smooth co-ordination producing a flowing motion of the clubhead through the ball.

Texas Wedge: n. A shot played from off the green with a putter and putting stroke.

Thin: adj. Referring to a shot hit with the leading edge of the Clubface above the South Pole of the ball but still below the Equatorial or Horizontal Axis.

Think Tank Time: n. The amount or percentage or proportion of the 'Overall Shot Interval' that is utilized in the 'Conscious Mind' for processing the 'Components and Procedures' of one stroke. The balance of the 'Interval' is the 'Subconscious' aspect which is about 1.4 to 2.0 seconds regardless of the 'Conscious Interval'.

Three Putt: n. v. To take three strokes to sink one ball which originated on the putting surface. The act or happening of making a three putt. Not 'Cool'!

Three Quarter Shot: n. A 'Less Than Full Swing Procedure' that involves the Brace Hand's travelling 75% of its usual 'Full Swing Travel Distance or Length'.

Through the Green: n. The entire course except the teeing ground and the actual greens.

Throw-Away: n. This 'Condition' is the becoming 'IN LINE' of the 'Hinged or Jointed Lever Assemblies, Target or Brace'. For example, whenever the 'Bent Brace Shoulder, Elbow and Wrist' become 'Extended or Straight', there is no more 'Accumulator or Stored - Potential ENERGY' in reserve or available to produce 'POWER or THRUST'. 'Throw-Away', from a 'Brace Side Perspective', means an 'IN LINE Lever' where the Clubhead is 'IN LINE or LEADING' the Hands or Clamps. The 'Accumulators are 'SPENT or Exhausted of ENERGY'.

Thrust: n. The FORCE applied to the 'Lever Assemblies' in both 'Directions' and thus to the Golf Club through the 'Pressure Points' of which there are 'Four'.

Tight: adj. Referring to a fairway or hole that is very narrow, usually lined on both sides by trees or rough or hazards. Referring to a lie when the ball is very close to the ground with very little grass or material beneath it.

Timing: n. The pace and movement in a swing; also the way in which the muscles coordinate to produce a good 'Swinging Motion'. 'Timing in the Golf Swing' refers directly to the 'Pre-Selected Components MATCHING the Pre-Selected Procedures'. It is the 'Consistent RPM's of the 'Three Zones of the Golfing Machine'; in other words, the Body, the Arms and the Hands and Golf Club all 'Turning' at the same 'Rate or Velocity or

Timing', 'Turning about the Spinal Crankshaft together or on the same 'Radial Line'. 'Synchronized Components Travelling on an Inclined or Tilted Circular Plane'.

Toe: n. The end of the clubhead farthest from the shaft and the feet of the player.

Toed Shot: n. A shot struck off the Toe of the Clubhead.

Topped Shot: n. A shot struck by the leading edge of the Clubhead above the Equator.

T.O.B.: n. phrase. Abbreviated term for 'Top Of Backswing' or the farthest point from the ball that one takes the Clubhead and Body in the back or up swing, before making the Direction Change and forward or down swing.

T.O.F.: n. phrase. Abbreviated term for 'Top Of Forward Swing' or the farthest point from the ball that one takes the Clubhead and Body in the forward swing in the FOLLOW FINISH segments.

Target: n. Primary or ideal location for finishing one's golf shot; the predetermined optimal destination for the Ball Flight. Generally the Pin, Hole, Cup, or QUARTER.

Target Line: n. Term for the Straight Line from the centre of the ball to the Centre of the Target which is generally the Pin, Hole, Cup or QUARTER. The Clubhead should optimally swing along this Target Line to make solid Impact as the Ball sit on or above it.

Topped It: v. phrase. Phrase describing a Golf Ball strike in which the Clubface makes contact with the Ball above the Equatorial Centreline.

Torque: n. Term in Golf for the 'Bending & Straightening' of the 'Golf Shaft'. Also referring to the 'Twisting first in one direction and then back' of especially the 'Tip of The Golf Shaft' which is in Rotation around the 'X or Longitudinal Axis of the Shaft'. This 'Tip Torque' directly affects 'Clubface AIM and Clubhead Action Through Impact Zone'. 'Clubhead Dynamic Stability' is directly affected by the 'Shaft Tip Longitudinal Stability and Timing'.

Trajectory: n. the condition of having loft in Ball Flight up from

the ground and returning back to the ground. The curved Ball Flight gaining in altitude to the Top of Flight and returning symmetrically back to earth. It is Ball Flight in an vertically arcing shape.

Trap: n. Slang term for a sand or grass bunker or swale. You will not find the word 'Trap' in the rule book, as it is a 'Bunker' either sand or grass.

Travis, Walter J.: N. An Australian-born American, Travis took up golf at the age of thirty-five. Known as 'Old Man', he won the U.S. Amateur Championship three times and the British Amateur Championship in the first and only attempt in 1904.

Thin: adj. Term for striking the Ball quite above it's South Pole with the 'Leading Edge of the Clubface'. This means that the 'Sweet Spot or Optimal Percussion Area(OPA)of the Clubface' will make contact with the Ball above the most desirable point. The Clubface will be Higher on the Ball than necessary for 'Optimal Performance'. Opposite to 'FAT'.

Tight Lie: n. phrase. Term for the Golf Ball's sitting or nestled DOWN into the fairway or hitting surface causing less than all the Ball to be visible or available for striking. Opposite might be a ball that is 'Sitting Up'.

Toe: n. Opposite end of the Clubface to the Heel, just as in a shoe.

Topped: adj. As in 'Topped It', the leading edge of the Clubface strikes the ball above the South Pole and even above the Equatorial Centreline or Y Axis of the Ball. Simply above the South Pole may just be THIN.

Top Spin: n. Rotation in a counter-clockwise direction about the 'Y Axis' (Horizontal Axis) imparted on the Ball by the Clubface. Spin into or in the same direction as the direction of travel or Ball Flight Line. Sometimes called 'Forward Spin' as opposed to 'Back Spin' (Bottom Spin).

Torque (Shaft): n. is the amount a shaft will rotate around the X-Axis or longitudinal axis in response or yield to a know twisting Force or moment. Expressed in degrees, torque ratings are usually obtained in static testing by individual shaft manufacturers and are not subject to any monitored or tested industry standards. Published torque ratings are generally determined prior to any 'Tip

Trimming' has taken place. Figures are from 'Blank Length' or the O.E.M. conditions. Tip Trimming will generally alter performance criteria and conditions.

Touch: n. A player's sense of 'FEEL' and his repetitive ability to 'Read Shots' and produce accurate or even precise results. It is very much 'Visual Sensory' or what we call 'Reflex Golfing' which is 'Ultimate Performance Plateau'.

Trajectory: n. The height and angle or shape of the 'Ball Flight' versus 'Distance across the Ground'. So it is 'Vertical Movement related to Horizontal Movement'.

Trigger: n. The term 'Trigger' is used to denote an action which initiates or precipitates 'Release of the POWER Package Assemblies of POWER Accumulators' to develop or supply FORCE to the Golf Ball. It is the 'Shortening and Lengthening' of the 'Third Brace Side of the Triangular Assembly' which Moves the 'Lever Assemblies' to and through IMPACT per the Pre-Selected Procedure. Two types of 'Triggers' are the 'Sweep and the Snap'.

Trolley: n. Term for the 'Pull Cart' used to transport ones 'Golf Equipment' around the course as opposed to carrying this equipment in a bag slung over the shoulder.

Trouble: n. Rough, hazards, trees, or any other obstacles on the course in play.

Trouble Shot: n. A recovery stroke made from a difficult position or location near an obstacle or in a poor lie.

Trunk Slammer: n. a colloquial term for having 'missed the cut'. It means figuratively that you put all your gear in the trunk of the car and slam it closed before departing the golf course.

Turn: n. The halfway point in an 18 hole round of golf. The motion of rotating away from the ball on the backswing and towards the ball on the front swing. Coil and Uncoil, PIVOT.

Two Club Lengths: n. Phrase describing the distance from one point to another that is limited to the 'Length of Two Clubs' (usually the Driver) and generally for the purpose of making a drop or getting relief.

U

Un-cock: v. To allow the 'Wrists to Straighten' or come back to neutral during the 'Forward Swing'.

Un-Coil: v. To reverse the process of 'Coiling' ('Loading or Winding') which 'Accumulates, Loads or Stores Potential Energy' (see 'ALSDR')

Un-Load: v. To reverse the process of 'Loading' ('Coiling or Winding') which 'Accumulates, Loads or Stores Potential Energy' (see 'ASLDR')

Un-Wind: v. To reverse the process of 'Winding' ('Loading or Coiling') which 'Accumulates, Loads or Stores Potential Energy' (see 'ALSDR')

Under-club: v. To select a club that does not provide enough Distance for the desired shot.

Unplayable Lie: n. The position of a ball at rest that makes it too difficult to attempt a stroke. (unless you are Sergio Garcia or stupid !)

Uphill Lie: n. When a player's Target Foot is higher than his Brace Foot at address, causing him to make compensations in order to strike a good shot.

Up & Down: n. phrase. Term for getting into trouble in an approach shot to the green and making a very good next shot that leads to a Par situation, with or without a putt. If the short approach shot were 'holed' it would still be an 'Up & Down', but one very beneficial to the player's putting statistics. (0 Putts)

Upright Swing: n. A swing that moves the club quite 'Up and Down' or on quite a Vertical Plane and not on a Horizontal Plane.

Upswing: n. The backswing portion of the swing from address to the 'Top Of Backswing'; 'Swing SEGMENTS #2B and #1B' or 'Swing SEQUENCE #1, #2 #3, #4 and #5'. Likewise, in the forward swing, to the 'Top Of Forward Swing'; 'Swing SEGMENTS #3F and #4F or 'Swing SEQUENCE #8, #9 and #10'. Whenever the Clubhead is being 'raised' during the entire 'Swinging Motion', back or front.

V

Vardon Grip: n. The overlapping grip so perfected and popularized by Harry Vardon.

Vector: n. The quantity or measured results related to 'Force' that has both 'Magnitude and Direction'. This type of information is critical or very pertinent to what is called the 'Resultant Distance and Direction' the Golf Ball travels. The 'Movement or Motion' resulting from all the 'Forces' acting on a 'Mass' or 'Body'.

Visualization: n. Forming a mental picture of the correct swing Ball Flight or Roll Line needed to best prepare to make the IMPACT task happen.

V.R.B.P. #1: n. The first or primary 'Visual Reference Balance Point' which directly contributes to ones 'Balance' in the Golf Swing. The Ball provides a 'Fixed or Stable' visual reference, a 'Point In Space' on which we can focus so as to enable our sensing any 'Movement' off the stable position so necessary to striking the Ball. Set-Up and Swing Balance is essential.

V.R.B.P. #2: n. The second or secondary 'Visual Reference Balance Point' which directly contributes to ones 'Balance' in the Golf Swing. The 'Precise Target or PIN' provides a 'Fixed or Stable' visual reference, a 'Point In Space' on which we can focus so as to enable our sensing any 'Movement' off the stable position so necessary to striking the Ball 'Dead At The Stick'. Finish Balance is the result of a good 'Set-Up and Swing Balance' combined with a good completion of the 'Swinging MOTION' 'Down-The-Line' all the way to and through the Target or Pin.

Visual-Physical Sequencing: n. The process of 'Visualization' with the conversion or application of the data gathered with the 'EYES' to the 'Golf Body Machine' for the organization and execution of 'Components and Procedures'. It is essential in the creation of a 'Subconscious State of Trusting Mind' so necessary in making successful shots.

W

Waggle: v. To move the clubhead and the body including Hands, Wrists, Arms, Shoulders and some of the Lower Body Machine in a miniature Impact Zone movement so as to relieve Tension and to FEEL the actual Impact in miniature before start the backswing or takeaway. The most recommended type of 'Waggle' is the 'PIVOT Waggle'. This function is key to reliable and correct Motions. It is 'Leg Driven'! It takes place 'FROM THE GROUND UP' and 'FROM THE INSIDE OUT'.

Water Hazard: n. A defined body of water on the course.

Water Proofs: n. Colloquial term for your 'Weather Gear' or water repellent outer clothing or garments.

Weak Grip: n. A grip on the club in which the hands begin rotated toward the Target at address so they will keep the Clubhead and Clubface from over closing through Impact. If not deliberate, it is a Set-Up error and need to be adjusted in order to accomplish the Pre-Selected Stroke Pattern.

Wedge: n. A pitching, approach, sand or lob wedge usually high-lofted to create high-flying and soft-landing Ball Flight.

Weight Distribution: n. The division of body weight between each side of the body at address with especial attention to Stance.

Weight Shift: v. The process of moving weight in the golf swing from balance at Address to the aft or Brace Side, back to the central Impact Zone or Impact FIX and through to the front or Target Side in the Follow Finish Stages or Segments of the swing. It is very important to understand and realize that this 'Weight Shift' is NOT a deliberate mechanical task as so many instructors and golfer make it to be. 'Weight Shift' is the natural or incidental result of making a good TURN or PIVOT. If it is a natural 'By-Product', do not attempt to Make It Happen, but '**Let It Happen**'.

Wethered, R.H. 'Roger': N. A first-class player who won the 1923 British Amateur two years after losing a British Open play-off to Jock Hutchison in 1921. Roger was the older brother of Joyce Wethered, who herself won five consecutive English Ladies

Championships and four British Ladies Amateur Championships.

Whiff: v. To miss the ball completely with a swinging motion. Also 'Air Ball'.

Whins: n. Another name for 'Gorse' as if the first were not adequately ugly!

Whippy: adj. A term that describes the condition or characteristic of a 'Golf Shaft's Stiffness'. When a shaft is soft, it tends to be 'Whippy' like a buggy Whip'. Hence the term and name. This shaft characteristic can cause the 'Ball Flight' to be erratic as the 'Clubface Aim' is duly inconsistent during the swinging motion.

Winter Rules: n. Rules in force when the course is in poor condition, allowing the player to 'Pick, Clean and Place' or improve his lie within a specific distance (one or two Club-Lengths) but generally 'Not Closer To the Hole'. Sometimes called 'Preferred Rules'.

White, Jack: N. Beat our Braid and Taylor by one stroke to win the 1904 British Open.

Worm-burner: n. A miss-hit shot that travels very low to the ground, Also called the 'Daisy Cutter'.

Wrist Cock (3rd lever or articulating joint): n. as in the fly-casting fisherman, it is the Flail producing Swingle velocity through a Hinge arrangement with a Handle. The cocking or un-cocking of the wrist in the back and forward swing. In Golf, it is the shortening and lengthening of the 'Target Lever Assembly' to reduce 'Clubhead Angular Inertia' and to produce a rapid RATE of increase of the Clubhead Surface Speed in MPH but not in RPM.

Wrist Cock Release: n. Wrist Cock is an 'Up & Down ACTION' that controls the Clubhead and NOT the Clubface. The 'Turn, Vertical and Roll ACTION' of the Wrist around the 'Horizontal Axis', the Radius and Ulnar Bones, controls the 'Clubface'. 'Wrist Cock Release' is the 'Release of POWER Accumulators #2 (Cock & Un-cock) and #3 (Turn and Roll). These ACTIONS deliver POWER or THRUST along a 'Delivery Line' to the Ball.

Weather Gear: n. Colloquial term for your 'Weather Gear' or water repellent outer clothing or garments.

Wedge: n. Term for a specific Golf Club designed to make quite lofted shots quite a short distance. These short-game tools are available in four distinct varieties; 1) Pitching 48 degrees of loft, 2) Approaching or Intermediate 52 degrees of loft, 3) Sand 56 degrees of loft and 4) Lob Wedge 60 degrees of loft. These lofts may vary with different manufacturer's specifications or desires.

X

X AXIS: Vertical Axis. Like the line from the North Pole to the South Pole through earth, this imaginary line or pin runs from 12 o'clock to 6 o'clock through the Golf Ball as well.

Y

Y AXIS: Horizontal Axis. The imaginary shaft or pin running through the middle of the ball from 9 o'clock to 3 o'clock or the Equatorial Axis..

Yardage Rating: n. The evaluation of a course's difficulty based purely on its Distance.

Yips: n. Extreme nervousness of a player while over short putts, causing him to make a spasmodic jerking action (not a Stroke) and miss the cup, even numerous times. Overcomeable!

Z

Zones: n. There are 'Three Zones or Lanes' in the Golfing Machine'. They are 1) the 'Body Zone or Lane', 2) the 'Arm Zone or Lane', and 3) the 'Hands Zone or Lane'. Zone One is 'Body Control' which involves PIVOT, BODY, BALANCE. Zone Two is 'Club Control' which involves POWER, ARMS, FORCE. Zone Three is 'Ball Control' which involves PURPOSE, HANDS, DIRECTION.

Zone One Components: n. Includes the following Components: PIVOT, Shoulder Turn, Hip Turn, Hip ACTION, Knee ACTION, Foot ACTION. (**BODY**)

Zone Two Components: n. Include the following Components: Basic GRIP, Grip Types, Basic Strokes, Stroke Types and Variations, Address FIX, IMPACT FIX, Pressure Point Combinations, Target Wrist Hinge Positions and ACTIONS, LAG Loading, Trigger Types, POWER Package Assembly Points, POWER Package Loading ACTIONS. (**ARMS**)

Zone Three Components: n. Include the following Components: PLANE Line, PLANE Angle - BASIC, PLANE Angle - Variations, Hinge ACTIONS, POWER Package Delivery PATH, POWER Package Release. (**HANDS**)

Zoysia: n. A warm climate grass with course blades that can handle extreme temperature changes.

JUST A THOUGHT

While we are on the subject of 'Terms, Definition, Language and Communication', it seems appropriate to advise you of my linguistic sensitivity and politically correct nature.

The language we use, words strung together in sometimes complex array to accomplish communication, requires a vocabulary of significant quality and quantity to make it all work. '**Double Entendre**' challenges us! '**Phonics and Pronunciation Idiosyncrasies**' nibble at us! The more technical we get the more specific our terms and messages should become. Scientific language (think of Latin and Greek medical terms) becomes quite a test of both memory and simple understandable common communication.

An example of definition:

Thinking scientific and mechanical design:

QUESTION:

What is a '**BALL BEARING MOUSETRAP**'?

ANSWER:

A '**TOM CAT**'!

If I have occasionally used terms that are too scientific, please excuse me for this as I have tried diligently to avoid doing so. In any case, please use your 'Glossary' and other word or phrase files. They are 'Golf Specific Useful'!

Q2)

"They laughed at 'Joan of Arc' but she went right ahead and built it".

Gracie Burns

Set goals and 'Go For It'!

C2]

GLOSSARY OF 'GOLF LINGO'

1) SQUARE to SQUARE to SQUARE to SQUARE:

This is a term often used by pros and low-handicappers appears confusing. This 'CLUBFACE' explanation sounds like it 'GOES NOWHERE' since it is always the same. Sounds as though nothing changes so nothing is happening. It's a little like speaking to your wife; "Honey, I'm going to the store now to run your errands." Thirty minutes later the wife meets you walking back from the garage to the kitchen door and says "Where is my vanilla extract?" You reply that you did all the usual pre-trip actions, got into the car and started it. "Then I shifted into reverse to back out of the garage and 'Put my foot on the brake, Put my foot on the brake, Put my foot on the brake!'

This term means that, at all times, the 'Clubface Is Aimed Squarely At The Baseline or External Edge Of The Plane or Swing Circle'. It means that the 'Swinger' has relatively 'Quite Hands, Wrists and Forearms'. That the 'Swinger' is not 'Flippy Handed'!

You can see how this 'SQUARE to SQUARE to SQUARE to SQUARE' picture might not send the right message. It appears to go nowhere. I know what it means but that does not matter to you because you are 'Swinging Your Club'. It is you who either must understand it or not become involved with it at all.

A better way to explain this clubface sequence might be as follows:

SQUARE to OPEN to SQUARE to CLOSED

Think of a door; half way to fully opened, or sticking right out into the hallway, 'SQUARE To The Traffic', then swinging fully open against the wall ('OPEN'), then back to SQUARE and then slammed shut! ('CLOSED')

Setting up at 'Address Ready Position', the Clubface should be Square or pointing directly and precisely down the 'TARGET LINE' to the pin. Where the face is aimed at 'Separation' is where the ball will fly. When you start your 'Backswing TAKING the Clubhead AWAY from the Ball and Up To Hip-High', the door is fully opened against the wall in the hallway. On your forward swing it comes back to sticking right out into the hallway and then it continues travelling back to the '**SLAMMED DOOR**' position where the process is 'FINISHED' just as in the Golf Swing.

How hard you slam the door determines how far your propel the Ball, remembering that it is the 'Swinging Door' that 'Kicks the Ball in its Butt' and NOT the actual slamming of the door to the closed position. It's 'Swinging The Clubhead T H R O U G H the Ball' and not hitting it with a mighty blow that makes all this smoothness translate into a 'Freddy Couples Thing of Beauty' with seemingly so little effort.

All of these 'Door Position Alignments' are 90 degree moves or position changes and are thus considered to be 'Square Moves' or stations although the 'OPEN and CLOSED' are parallel to the TARGET LINE. In the fully 'Open Position' the 'Clubhead' is pointing directly away from the Pin and in the 'Closed Position', it is pointing directly at the Target.



DOOR IN HALLWAY
Impact Fix with Iron



DOOR IN HALLWAY
Impact Fix with Driver



Pivot With Clubhead At Chest Level



Pivot With Clubhead At Hip Level

If you have ANY difficulty seeing this in your mind, trade your mind in for a new one, "NO NO NO", excuse me. Pick up a Club and perform the exercise right now until you 'FEEL the Action' and results. It's late in the evening, actually 03:30 in the morning and I got a little 'Negative Thinking'. Not allowed right? Begging your forgiveness, and Thank You !

2) **INSIDE - OUT:**

(referring to your SWING or CLUBHEAD PATH and not the condition of your socks and underwear when they emerge from a too-hot, shrunk-them-again dryer! If you think they are small, try putting them on HOT! If you can get them on, they will either provide support or cut off your circulation.)

When I started taking GOLF seriously in my twenties, which was far too late, some of my chums who played proficiently used this 'Inside Out' term and I hadn't a clue what it meant. Too proud to ask, knowing that they would never miss an opportunity to deliver a jab, I persisted to pretend to know the 'Inside Scoop'. It helps to ask and to know the 'LINGO'. They never told me.

With your Feet, Knees, Hip and Shoulders all 'Aligned Parallel to the TARGET LINE' (the straight line from the centre of the ball to the centre of the cup) you are standing on the 'INSIDE of the TARGET LINE'.

When you 'Swing your Clubhead' on its full trip, all the way from just behind the ball back, low and slow (inside) to the 'Top of Swing' then change direction, dropping down and hitting through the backside of the ball (from this inside Path), your 'Clubhead' continues to follow a 'PATH' that travels momentarily somewhat to the 'OUTSIDE or across the TARGET LINE' toward the other side from where you are standing. Of course, this 'Swinging Motion' soon causes the Clubhead to travel back to the 'Inside of the TARGET LINE' because the club's 'Net Pivot Point' is near the 'Centre of your Chest' (Clavicle) and you are standing on the 'INSIDE' where your Swing finishes. One might well describe this total 'Clubhead Path Movement' as 'INSIDE' (backswing) - 'INSIDE' (forward swing) - (Impact) OUT or SQUARE - INSIDE (finish).

I think it is worthwhile for you to know that the 'Clubhead PATH' from the 'Top of Backswing' (T.O.B.) is 'DOWN - OUT - FORWARD & THROUGH' (D.O.F.T.) and back to the 'INSIDE'.

Keeping it simple, the 'INSIDE-OUT' term refers to the forward portion of the Swing only. ('Swing Segment #1F & 2F')



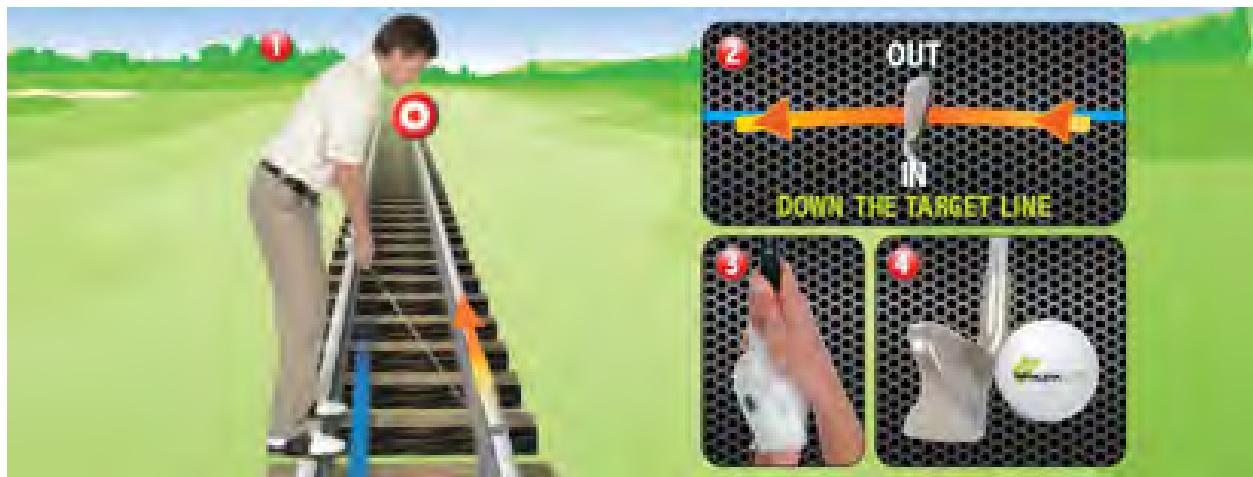
'I/O'

3) OUTSIDE - IN:

Thinking about the 'Inside-Out' definition above, this second 'Clubhead PATH', 'Outside-In', involves a similar explanation but during 'Swing Segment #1F', your swing (reaching out or over the top, casting) causes the Clubhead to travel over or across the 'TARGET LINE' (above Plane) to the outside (over Plane) and then due to the fact that your 'Net Pivot Point' is just on the 'Clavicle side of your Sternum', the 'Clubhead' is pulled or travels back to the inside, as the 'Hub of a Wheel' keeps the tire travelling back toward centre. The net 'Clubhead PATH' and 'Ball Flight' will be to the straight LEFT of fairway centre with a 'PULL' and curving left to right if the 'Clubface is Open at IMPACT' (Spin-Rate). This is called the dreaded 'SLICE'. The Clubface can be open for two reasons which we will identify and discuss later.



'O/I'



'S/S'

I hope this simplifies the two terms a little. When I first heard this term, and for some time after, as I spent a lot of time with 'Clubhouse Jocks' who either did not care or never took the time to explain their 'LINGO', I had no idea what they were talking about, and to avoid embarrassment, again did not ask. To be quite honest, as I said, the term initially created a vision of socks or underwear that often got 'Inside Out' during the dry cycle, especially when I was still single!

Q3)

'Tis better to be thought a fool, than
to open your mouth and remove all doubt'.
(so I didn't)

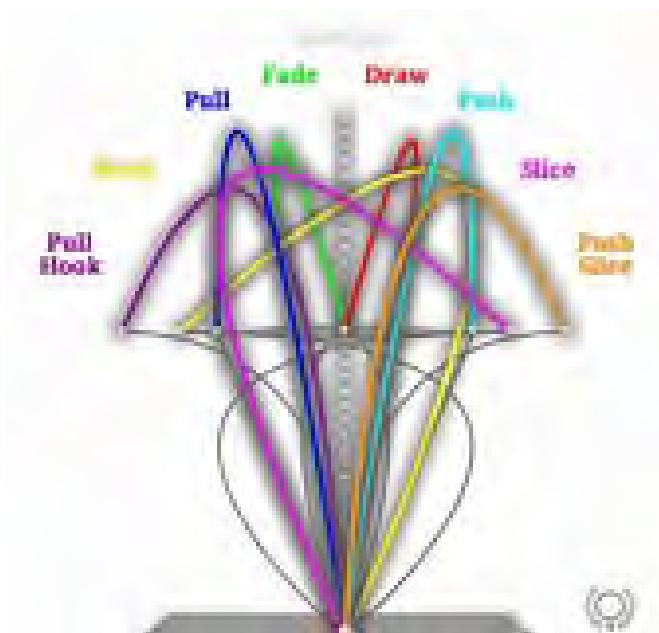
There is a downfall to this reserved nature. You learn very slowly and most golfers, at least those who really know, would be pleased to take a moment to explain the nuances to you. Be careful. There are those out here in the real world, however, who do not know and will still take the time to explain the meaning to you!

4) **BALL FLIGHT:**
(Three Dimensional Profile or Route)

DIRECTION, DISTANCE and TRAJECTORY

The initial 'Ball Flight-Line or Flight-Path', (direction of ball travel), is determined by 'CLUBFACE AIM' and the characteristics of this flight, the shape, the curving nature of the 'Ball Flight' results from the 'CLUBHEAD PATH' which is it's routing relative to the 'Target Line', this 'Inside-Out and Outside-In' we just discussed.

Shape is caused by putting 'SPIN or CUT' on the Ball. 'X and Y Axis Spin Rate' and 'IMPACT or FORCE LINES or VECTORS' specifically influence 'Ball Movement' through the air. This curvature in flight is not just a random event. It is created. More later.



9 Ball Flight Patterns
an example of Trajectory

5) **BALL FLIGHT PATH:**

(Ground Track - DIRECTION and DISTANCE)

There are but few distinct 'Ball Flights' and characteristics. Once the Ball leaves the Clubface, it either travels to the 'RIGHT of TARGET LINE', 'STRAIGHT' or to the 'LEFT of TARGET LINE'. The characteristics are either 'CURVING to the RIGHT', 'NEUTRAL' or 'CURVING to the LEFT' in varying degrees.

This 'CURVING' is a result of 'SIDE-SPIN' clockwise or counter-clockwise about the 'Vertical or X Axis of the Ball'. This axis is like the 'North South Pole Line'.

The Ball IMPACT, consequential to the 'Force of Gravity', either moves it 'UP or DOWN'. It is either spinning so that it climbs or descends. This is called either TOP SPIN about the Y Axis or Equatorial Axis (ball dives down) or BOTTOM SPIN (ball climbs up) about the horizontal or Y Axis of the ball. This axis is the line from one hemisphere to the other and passing through the centre of the earth at the equator.

FOR RIGHTIES:

(I once heard this Handing called 'Ralphs & Louies')
Just give man a chance to invent! He's a dangerous critter!

Think 'TARGET LINE' is that straight line from the '**BALL To The PIN**'.

Very generally, any Ball that travels to the left of this line is on the 'HIGH ENERGY SIDE' of the fairway...too much of something. 'PULLS, DRAWS and HOOKS' work the high-energy side. Any ball that travels to the right of this line is on the 'LOW ENERGY SIDE' of the fairway. 'PUSHES, FADES and SLICES' work the 'Low-ENERGY Side' ...too little of something.

FOR RIGHTIES OR LEFTIES:

So now you and I can simply refer to either the '**High ENERGY Side**' or the '**Low ENERGY Side**' of the Target Line for either 'Ralphs or Louies', 'Right-Handers or Left-Handers'. More later.

6) **SPIN RATE:**

This term must be simply understood as it creates the '**Shape Of The Ball Flight**', including '**Trajectory**' and that movement to the 'Low and High Energy Side of the Target Line'. (known as Fade - Slice and Draw - Hook respectively)

Not to be confused with respectfully!

Let's have a quick look at rotation or Spin Rate around the X or Vertical (North South Pole) and the Y or Horizontal Axes (Equatorial East West Poles). We have touched gently upon this topic in various locations throughout the book, but one more glimpse at the subject in detail will not hurt.

SPIN RATE ABOUT THE X & Y AXES

The 'X Axis' is the North South Polar Axis (Vertical) Line Between the North & South Poles. This 'Orbital Action' explains and enables our 'Night To Day Earthly Rotation'. ('Sunrise to Sunset')

The 'Y Axis' is the East West or Equitorial Axis (Horizontal) which primarily allow our 'Seasonal Tilt & Inclination'.

The 'Human Body Machine' experiences and utilizes both 'Rotational & Seasonal' activity.

The 'Golf Ball' distinctly works 'Horizontally around the X Axis' (Side Spin Rate - Curvature) as well as 'Vertically - 'Top & Bottom Spin Rate'. (see 'Over & Under Spin') This action aound the 'Horizontal Y Axis' creates 'Trajectory and Parabola'. (Climbing and Descending)

Let's think '**Aerodynamics**' for a moment. If you have ever been at all scientifically involved in aviation, as I have had the distinct pleasure of being, you will likely already completely understand this material. Carry on or stick around and prove me correct.

Objects in motion will generally move in a direction or towards the 'Path of Least Resistance or Pressure' as the case is here. Sort of human nature..... doing as little work as necessary, although at times it may not be enough!

THE ZERO ROTATION BALL:

The 'Zero Rotation Ball', not unlike a bullet that is not spinning due to the absence of barrel rifling or a '**Baseball Knuckle Ball**', will not track or follow a very precise path. We make bullets spin to create dynamic stability. The Golf Ball is no different. Zero rotation Golf Balls rather 'Mush' through the air than pierce it. Dimples make the Ball Spin' due to 'Drag or Surface Resistance'.

THE 'X AXIS' SPIN RATE:

From the visualization above you know what the 'X Axis' is and understand that our Golf Ball can turn or rotate around this central axis in either the '**Clockwise or Counter-Clockwise**' direction. These directions are even called 'Positive or Negative Spin-Rates' on occasions.

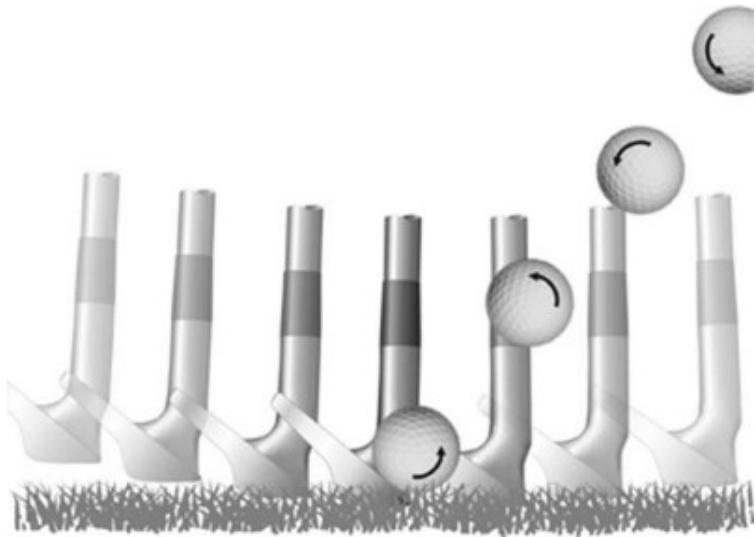
HOW SPIN-RATE AFFECTS BALL FLIGHT:

Remember, dynamically, objects in motion move towards the '**Low-Energy or Low Pressure Area**' and away from the 'High-Energy or High Pressure Zone'. If someone is pushing hard on your 'Brace Shoulder', you would not move towards, but away from the push. Simple stuff!

Let us take a quick look at actual 'Spin-Rate' involved with a round object moving in a direction. This is beginning to sound like a Golf Ball. I will accomplish this discussion mostly with pictures.

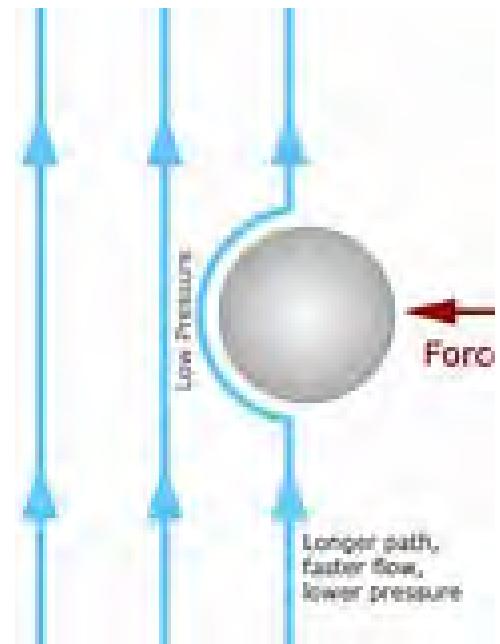
Let's deal with the '**Clockwise Spin-Rate**' first.

Let us assume we have a Golf Ball moving forward at 100 miles per hour with 'NO CROSSWIND'. Our Clubhead, Clubface has 'Cut Across the Butt of the Ball', not struck it absolutely 'SQUARELY', imparting a 'Spin and Spin-Rate' of, for example 130 Revolutions Per Second about the X Axis or North South Pole.. Let us, hypothetically assume that this makes a specific point on the equator of the Ball travel at a speed of 30 miles per hour.

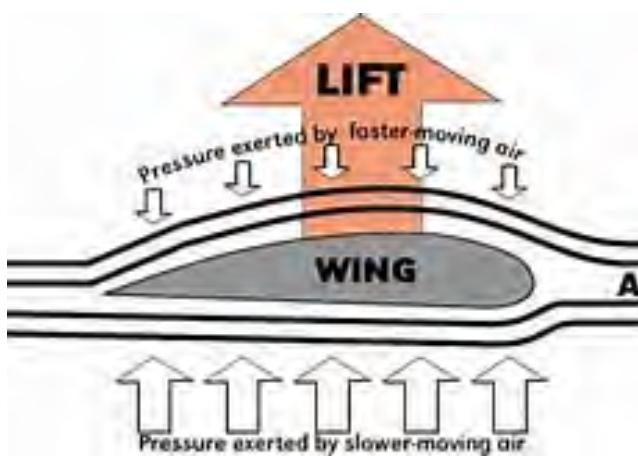


Spin Rate Drawing

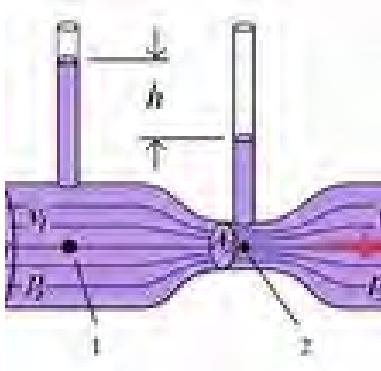
This is 'Spin-Rate' with forward Velocity and it creates some rather interesting physical relationships between the Ball and the Air in which it travels. The '**Relative Wind**' or speed of airflow past the Ball and the Ball's rotation around it's X Axis can be seen in the following diagram.



Bernoulli Effect



Bernoulli Effect on an AerFoil or Aircraft Wing
 Lift & Weight combined with Thrust & Drag
 (The 'A' is 'Direction Of Air Flow')



Venturi ' Air Flow' Effect

JUST SIMPLE MOVING THROUGH THE AIR

Now let us just consider one Ball travelling through the air at 100 miles per hour 'Velocity' with a '**Counter-Clockwise Spin Rate**' which creates an 'Equatorial Point Speed' of 30 miles per hour. The advancing point of the ball (Point A) meets the 100 mile per hour Air-Flow at 30 miles per hour. This means the contact or 'Advancing Point' total speed is 130 miles per hour.

The contact or '**Retreating Point**' total speed, on the opposite side of the Ball has a sum or total air-speed past the equator of the Ball of 100 mile per hour 'Relative Wind' less the 'Ball Rotation Speed' of 30 miles per hour which is moving in the same direction as the air-flow. This means the 'Retreating Point' relative air-speed is 100 MPH - 30 MPH = 70 Miles Per Hour

Air coming in contact with the '**Advancing Dimpled Ball Cover**' at 130 MPH will exert considerably more 'Pressure' than will air coming in contact with similar '**Retreating**' material at 70 MPH. Remember that hard push you recently got on your 'Brace Shoulder'?

Recall which way you moved? Away from the 'PUSH'. So moves the Ball in this aerodynamic situation. The 'Ball's Flight' will always move in the direction of or towards the 'Low Pressure Zone', or 'Point B'.

THE SLICE ROTATION:

This Ball and Air-Flow situation (Clockwise Rotation) is the precise condition that is developed when you '**slice**' your Ball to the 'Low-Energy Side of the Fairway or Target Line'. When we prevent Cutting the Ball' or causing strong 'X Axis Rotation', we cease to slice!

If you picture the precise opposite, you are dealing directly with that '**Hook**' your ball so impudently comes up with; all on its own, of course!

THE 'Y AXIS' SPIN RATE:

When our Ball spins on its 'Equatorial Axis' (Y Axis) the aerodynamic effect is the same as on the 'X Axis', just evolving 90 degrees to the first situation with Gravity always working on the Mass in a consistent manner. All the above diagrams are applicable. Take a moment to visualize this overall effect simply turned one quarter of a turn right or left.

We have touched on this before as well. One more time. When your Ball is spinning with '**Under Spin**', so the bottom of the Ball is spinning or moving towards the Target, your 'Ball Flight' will be '**Towards The Low Pressure Zone**'. You now know what that means; your Ball will climb. The 'High-Pressure Area' (HPA) is on the bottom, so the Ball will move towards the top or 'Low-Pressure Area' (LPA). Until the 'Inertial Energy' dissipates, the 'Velocity in Relative Air' and the 'Spin-Rate' slows, the ball will continue to climb. Once the total 'Ball Energy or Momentum' decreases below a certain level, your Ball will descend back to 'Mother Earth'.

'**Over Or Top Spin**' means your 'Ball Flight' will dive towards the ground. Seldom would one either create or use this direction of Spin. Topping the Ball creates this 'Direction Of Rotation and Flight'. You know the results!

I have talked about '**Feeding the Wind**' and one might deliberately strike a 'Hooked or Drawn' ball when the wind is from your 'High-

'Energy Side of the Target Line'. Your Ball will try to move toward the 'High-Energy Side' while the wind is attempting to blow it back towards the 'Low-Energy Side of the Target Line'. Take a moment to draw some diagrams that depict this situation and others. Understanding this 'Wind-Direction and Spin-Rate' will help you to play better, smarter Golf.

I hope this helps.

7) SHOT PATTERN:

This is similar to 'Ball Flight Path' above but in different terms and details so that your scope of language and knowledge grows. Sometimes we call this 'Horizontal Ball Shape'.

There are under this topic ONLY nine (9) possible shot shapes or patterns. The 'Primary' are 'Straight Straight, Straight Right and Straight Left'. Then we achieve 'Curving Movement'.

High Energy Side

- 1) Hook
- 2) Pull
- 3) Draw
- 4) Pull Draw or Fade

Target Line

(Straight Draw)

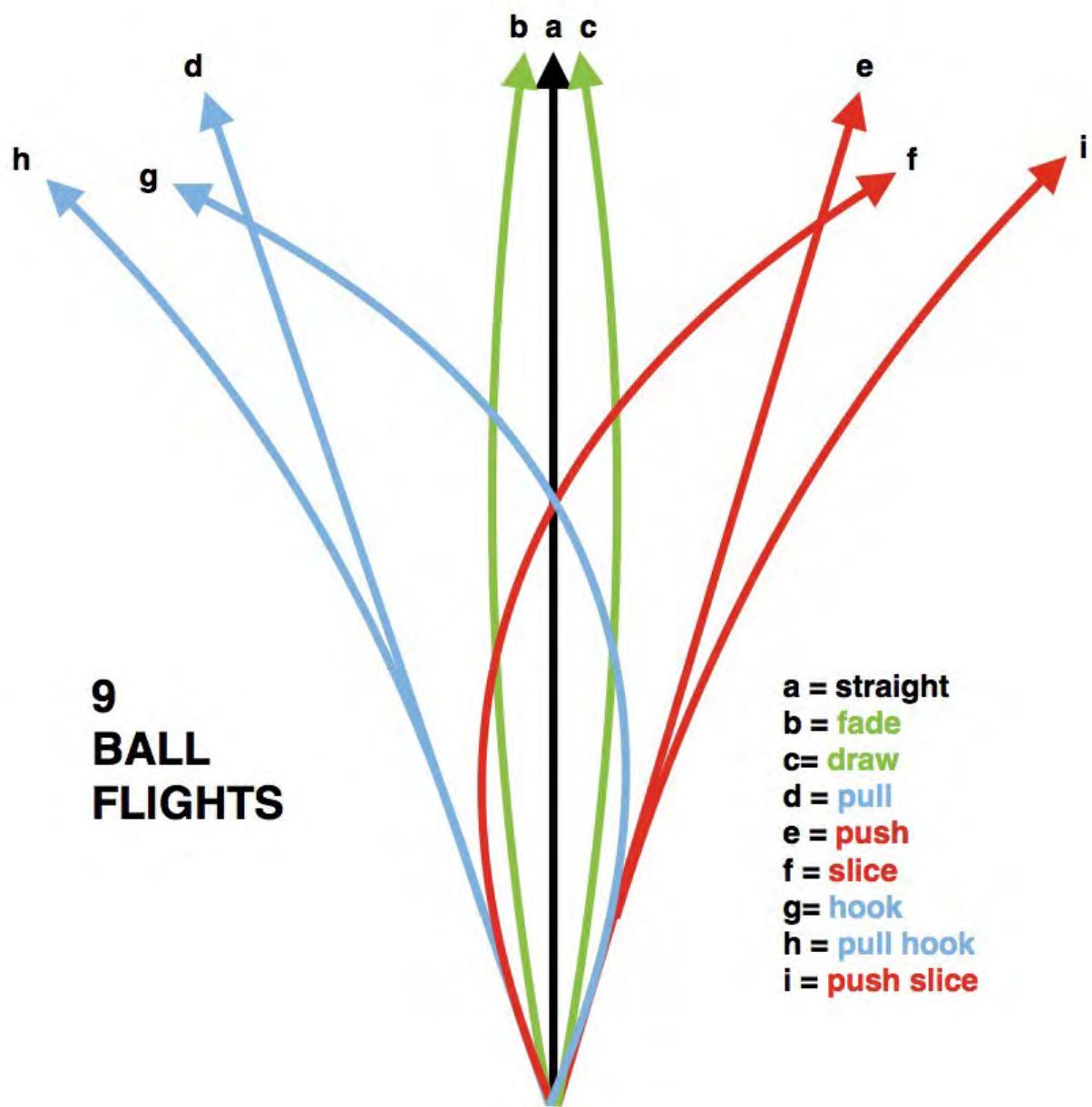
- 5) STRAIGHT BALL FLIGHT

(Straight Fade)

Low Energy Side

- 6) Push Draw or Fade
- 7) Fade
- 8) Push
- 9) Slice

All of your shots fall into one of these categories.



Shot Pattern
Plan View

While on this topic of 'Shot Shape' we should briefly consider '**TRAJECTORY**' which is the 'Vertical Ball Shape' of 'Ball Flight'.

You can either have 'High, Medium or Low Trajectory. These shapes are created generally by the 'Loft of the Clubface' or by the factory and should not be created by your conscious effort or any 'Lifting Moment' in your Hands.

When you become slightly more advanced and better understand 'Working Or Controlling The Ball', you should vary Trajectory primarily with 'BALL Placement or LOCATION' in your 'STANCE'. If you place your ball one or two ball widths aft or behind your optimal 'Set-Point, Bottom Of Swing Arc' you will 'DELOFT your Clubface at IMPACT Position' (Net Effective Loft). If you place your ball one or two ball widths ahead of your optimal 'Set-Point, Bottom Of Swing Arc', you will increase your 'Net Effective Loft' and produce a higher flying 'Trajectory'. This is because your 'Clubface' comes in contact earlier (less Loft) or later (more Loft) than normal.

This 'SHAPE' is very much a function of 'Spin Rate' about the 'Y or Equatorial Axis' as opposed to the 'X or Polar Axis' if you like to think of it in terms of the world on which we play this 'Great Game of Golf' (the Green Ball).

Pull your #7 Iron out of your bag and make some very 'Slow-Motion Swings' through 'IMPACT Zone' and carefully observe your 'Clubface Angle or Loft' change as the 'Clubface Leading Edge' is approaching and departing from 'SQUARE' and the 'Optimal Ball Location' ('OBL') or your 'TAP TAP TAP Position'. In this exercise, make sure your Hands are quite relaxed so as always keep your 'Clubhead Control' smooth and rhythmic, so that your Hands can operate, Rolling and Cocking, properly.

Your understanding of this reality will enhance your ability to 'SET-UP' and to 'FEEL' the 'Motion through IMPACT' which is so necessary in making Consistent performance.

8) **HANDSY:**

Only the very trusting and controlled player may adjust his 'Hand Speed' relative to 'Hip Speed' to produce a lot of under spin and a higher Trajectory but the timing and 'IMPACT' must be very right to avoid 'Clubhead Throw Away' and 'Thin Hits'.

**EACH GOLF CLUB HAS INDIVIDUAL
CHARACTERISTICS & PERFORMANCE**
Length, Loft & Lie

These characteristics each affect the 'Golf Ball Performance'. We must 'Calibrate Our Bags' as we learn our 'Club Performance'.



Trajectory
Elevation View

9) **SET UP:** (Pre-Flight)

Remember 'SET-UP' is 'STATIC' while 'EXECUTION' is 'ACTIVE'. If you can think of your entire performance as being part of the one or the other 'ROUTINE', it will help you to identify and perform each with clarity and resulting in more 'TRUST and better PERFORMANCE'.

a) Identify the desired 'Straight-Line Ball Flight PATH'. (use the I.G.A. **BALL - PIN** 'Target Line Image' and then envision curvature required to get the job done. I call this 'Forming the Shot' and it is a firstly a mental exercise.)

b) Understand 'IMPACT CONDITIONS' that effectively create the desired results. Where does the Ball need to strike the Clubface and where does it need to be aimed?

c) Visualize and create a 'TICK TOCK Swing FEEL' and 'Clubhead PATH' that will create the 'IMPACT'.

This 'TICK TOCK' 'Pre-SHOT ROUTINE' will initiate the required body parts in the form of a full dress rehearsal. The commonly used but seldom understood 'Pre Swing WAGGLE' is one of these most important 'FEEL-Generating Routines'.

d) '**THINK POSITIVE**' "Yes I Can" or if your feel very determined "You Bet Your Ass I Can" depending on your disposition. (the '555 GOLF' 3 C's)

10) **TEMPO:** (Timing, Speed, Cadence, Pace) Fast - Slow

11) **RHYTHM:** 'TICK TOCK' Symmetry, regularity of flow, the flow of Cadence.

12) **CADENCE:** Emphasis Point in a Rhythm. The I.G.A. 10 : 6

Rhythm has 10 units of time on the Backswing and 6 on the Frontswing. The Backswing has virtually no acceleration component, while the Frontswing has a lot, thus, although the 'Travel Distance' is the same, the 'Duration or Time Required' is very different.

13) **SWINGING MOTION:**

The '555 GOLF' secondary absolutes including the 'Pendulum Action or Swinging Motion' combined with the 'TICK- TOCK Rhythm' produces an early natural adaptation and commitment to 'TIMING and RHYTHM'.

Once you can understand, from a Websterian perspective, these essentials in GOLF, you will benefit from what a teacher most diligently strives towards, student achievement of '**PHYSICS and MECHANICS**' first and then '**GEOMETRY and FEEL**'. We all have an internal clock. Some of us are more aware of it than others, but 'It's In Us'! We all have an autonomic (involuntary) heart beat (except for golfers with NO HEART!) and we all enjoy the results of 'Breathing' which is more voluntary but still very 'RHYTHMIC'. This all leads to the Body Arms and Hands working at the same 'R.P.M.' around the 'Spinal Crankshaft'.

The old song lyrics 'I GOT RHYTHM. YOU GOT RHYTHM' is testimony, living proof of our inherent 'GOLF Internal Clock'! I am certain the lyricist was an obsessed GOLFER! By the way, this 'Rhythm' has very little to do with any specific birth-control procedure. Although, come to think of it, GOLF's most basic 'Objective or Raison d'Etre' is pure pleasure! There is so much consistency and commonality in our lives. Everyone should do it....Golf I mean!

14) **POINT OF CONTACT:**

The Ball will travel farther and straighter when struck closer or on the 'Sweet-Spot (OPA) of the Clubface'. This is simply efficient 'Mechanics' and sound 'Physics'.

15) **SWEET SPOT:**

This is very close to the 'Centre of Mass' of the 'Clubhead' and it is where 'Power or Energy-Exchange or Transfer from the Clubhead to the Ball' occurs most efficiently. It is not necessarily the

'Centre Of Measured Face' and is NOT the 'Centre Of Mass' which is '**INTERNAL**' to the overall object, just as the centre of the Earth is not on the surface. The 'OPA' is very close to the 'Centre Of MASS'.

16) **CLUBHEAD SPEED:**

The faster the 'Clubhead' is travelling, the farther the Ball will be propelled. 'Clubhead Speed Squarely applied to the Butt of the Ball' makes it all happen. In a nut-shell, 'Clubhead Speed' generates '**DISTANCE**' while 'Clubface AIM and Clubhead PATH produce the '**DIRECTION**' or 'Shape of the Shot'.

17) **ANGLE OF APPROACH OR ATTACK:**

The steeper the descent of the Clubhead to the Ball, the more Back-Spin' and thus the higher the Trajectory will be created reducing overall 'Distance' and generally causing the brakes to be on when the Ball makes contact or touchdown with the world.

We have all likely seen the pros make the Ball back-up upon landing and we have been led to believe this only the pro can do. Perhaps it is an advanced task requiring strong and trained Live Hands, but I want to assure you that if you have landed just three (3") to the right of the pin and you have caused the Ball to spin back twenty feet, you would have been better served with a 'Soft-Landing, Zero or Low Spin-Rate Action'. The best Ball is 'One Hop Stop'.

Everything in it's right amount, place and time. We call this moderation. In GOLF we call it on the screws and "That will play" or "I will take it".

18) **CLUBHEAD PATH:**

This 'PATH' on which the 'Clubhead' is travelling, in conjunction with the 'Clubface AIM'.... 'Square-ness to the Target'....creates the balls 'Initial BALL FLIGHT or DYNAMIC PROFILE'. The alternatives to Square create 'DRAW /HOOK and FADE /SLICE' and the faster the 'Clubhead Speed' the greater the 'Rotational Velocity or Spin Rate' and thus the greater the 'Deviation from STRAIGHT LINE FLIGHT', or the more 'Curve' is induced.

That so-admired '**SLICE**' is the result of an 'Outside-In Clubhead PATH' and a 'Clubface that is Open or AIMED to the Low-Energy side of the Target Line at IMPACT' or more precisely 'At the Moment Of Separation'. All too simple for such a demon! The 'FIX' is about that simple as well and we will deal with it and the 'Ugly Hook Sister' later in the 'Collection Of Books'. (see Table Of Contents)

19) **CLUBFACE ANGLE OR AIM:**

Where the 'Clubface Points', the ball goes! This 'CLUBFACE AIMING' directly influences the 'Initial or Starting Flight Direction' as well as the 'Enroute Profile or Curve'. 'Clubface AIM' is the relationship of the flat face to the 'Target Line'. Square is when the face is perpendicular or at 90 degrees to the 'Target Line or Pin' in a 'No Wind or No Curvature Situation'. If you are dealing with curvature, one should use the term 'Ball Flight Path' and not the straight 'Target Line'.

NOTE: One absolute truth embodied in this 'Great Game of GOLF' is that

Q4)

"The BALL GOES PRECISELY WHERE WE STRIKE IT....
 ... always!"

Dr. Karl M. Fischer

20) **SHOULDER TURN & HIP COIL:**
(knowing how and where it is 'COMPLETE')

This 'Turn & Coil' is a useful term but needs to be used correctly and not overused.

I think that the key word is 'TO COIL' your body from the ground up by turning your shoulders away from the ball until your 'Target Shoulder' makes contact with your 'Tallish CHIN'. How does it FEEL? I think you should 'FEEL' as though you have a very big powerful rubber-band from your 'BRACE FOOT' connected to your 'TARGET SHOULDER' (that's the one closest to the Pin). At 'SET-UP' it should be firmly muscular. Once you 'COIL' it should 'FEEL' quite 'TIGHT' and loaded ready to 'UNCOIL or UNLOAD' taking everything that has wound it up through the unwinding process.

Once this 'COILING' is accomplished and you have 'Loaded The Big Gun', simply maintain 'LOADING' on your Brace Foot and force or push your Target Heel back onto the ground (if it is off) and then make it 'UNCOIL' with the initial 'Lever Assembly Move' being a gravitational 'DROPPING MOTION' followed by some more pressure on your Brace Foot Toes creating a pushing or 'THROWING FEELING' of the entire Lever Assembly and golf club from behind and **THROUGH** the ball down the 'Target Line all the way to the PIN - TARGET or QUARTER'.

Always '**SWING In BALANCE**' and stay loose '**FEELING OILY**' in your joints.

'SWING BIG, HIT HARD' and your Ball will come down somewhere.

If you do not like where it came down, 'TAKE A BETTER PICTURE'!
(more later on this picture analogy, discipline and routine)

21) **TAKE A BETTER PICTURE:**

Earl Stewart, a fine player and teaching pro at Oak Cliff Country Club in Dallas, told Mickey Wright:

"Your mind is a camera. Take a sharp picture of the shot you want to produce. If you take a fuzzy picture, you will hit a fuzzy shot. But take a sharp picture and you will hit a sharp shot."

22) **VISUALIZATION or IMAGING:**

Again, 'SWING BIG. HIT HARD' and the ball will come down somewhere far away. If you do not like what you see, '**TAKE A BETTER PICTURE**'.

'SEE THE BALL and FEEL THE PIN'

If you do not like where the ball lands, take another clearly focused 'Mental Picture Feeling the PIN / QUARTER'. Draw a line (DEAD AIM) from the Pin along the ground to the Ball, back to the pin and slowly again back to the ball. Now make another trusting Swing, 'LOW and SLOW Back', up and down then forward firmly, or even hard, through the ball (SEE IT), while throwing the 'Clubhead' with your arms and especially your 'Live Soft Hands' at the flag-stick (EXTENDED...FEEL the Stick. Don't look at it.), breathing out fully 'Relaxed **T H R O U G H IMPACT**' so you can release and not 'PULL the Clubhead ROUND-HOUSED' about your 'Target Hip' causing your 'Swing to Pivot Off your Target Elbow' rather than swinging from your armpit(s). 'LONGISH ARMS' swinging under a 'Tallish CHIN'.

The shorter lever (Elbow to Clubhead) rather than a full length lever (Armpit or Shoulder Socket to Clubhead) will reduce 'Clubhead Speed' and directly decrease 'DISTANCE' while reducing any 'Clubhead Control' you might have hoped for making 'DIRECTION' a struggle.

With a 'Better Picture' and an improved efficient full length and long-armed (soft elbowed and kneed) swing, you will like the results a lot more the next time and will likely be inside the 'Five Foot Circle' 'BIRDIE RANGE' and that always works !

23) **KNOCK IT STIFF:**

This is a term I was going to put in the 'Glossary Of Terms' but in all my years of Golf I have never come across any one who can explain to me what in tarnation it means. I know what 'Knock' means. I understand the 'Indefinite Pronoun' 'It'. I am aware of the definition of the word 'Stiff'. Put them together and what do you arrive at? Goodness only knows!

Perhaps one of you, my readers can research this term for me and I shall write another Golf Book one day anon and take great pains to explain it to the future readers. (With the proper credits to whomever discovered the true meaning of the words!)

Actually I perhaps have the knowledge, more or less of what '**IT**' means. You can look that up in the 'Tour-Guide INDEX' if you would like to do so. But 'Knock' and 'Stiff' are still a mystery. Well one can, I guess 'Knock on a Door' and would have to be close to do so. That may be the key!

But what about that 'Stiff'?

There is such a thing as a 'Stiff Drink of Bourbon' but does that relate to the Game? A good shot of Scotch helps get one more relaxed for putting and touch. Vodka may steady your AIM. Wine could produce melancholy. Brandy is known for its healing properties.

Whatever, if 'Knock', 'It' or 'Stiff' helps one 'Get It in the Hole' in the 'Least Number of Strokes Humanly Personally Possible' one has truly found something of worth.

Perhaps this is a 'No-No Term'. 'Tis a mystery to be sure!

24) **A REMINDER:**

Just a reminder; I cannot think of one situation where and when you might need or be benefited by having either tight elbows or tight knees. They should never be more than '**Firm**'. These are four of those '**13 Articulating Joints**', two in the Upper and two in the Lower Body Machine, that need our particular attention and respect. Keep these joints '**Feeling OILY**'. If you do not fully understand the rewards, trust in my good advice and reap them. This will soon produce some understanding. Your buddies will compliment on your performance and your popularity as a playing partner will grow. Numbers DOWN. Wins UP. Schedule FULL.

How sweet it is!
Play well.

Q5)

'The Magnificent and Ridiculous are often so close
that they touch or one cannot see daylight
between them.'

Le Bouvier de Fontenelle

(real Golf Teachers can often see the closeness of poor
and very improved swings . . . and pass on this
reality and opportunity via inspiration.)

Q6)

'Financial rewards follow accomplishments,
they do NOT precede it!'

Harry F. Banks

(not unlike this Game of Golf!)

Q7)

GOLF is not a game of 'Perfect Shots'
but a dedication, an adventure in varying degrees,
to creating 'Better Misses'.

GLOSSARY of 'NO - NO' TERMS

1) "WEIGHT TRANSFER":

Often this term is used with instructor animation moving to the brace side while keeping his shoulders parallel to the Target Line and placing almost all the weight on the brace foot and then moving the weight alternately to the left placing it on the target foot.

This 'Lateral Sliding Left to Right and back Right to Left' motion visually sends the wrong message that sliding is beneficial and a positive move. It is not. It does not promote turning to and from the brace side and to the target side. With the trunk of your body 'Sliding Laterally' your arms will pass the hips and your hands will have to finish the shot. '**Sliding Is Negative Rotation**'. This overall action will create often the dreaded 'Snap Hooks' and 'Pulls' depending on the clubhead path. It prevents your performing 'Square to Open to Square to Closed' as discussed. (see your trusty 'Tour-Guide Index')

2) "KEEP YOUR HEAD DOWN":

If you try to lock your head into a position, you will tend to shift into a 'Forward Spinal Tilt' in the backswing or 'COIL' while moving into a reverse pivot in the completion of the front swing. Thus you will inhibit your Relaxed Finish and Follow Through. The well-being of your back will be compromised sooner or later which will cut-short your 'GOLFING' career and all the manifold pleasure it holds and so generously offers.

Let the head 'Float' on top of your spine and it will necessarily Flow with the spine during the entire Golf swing. This head freedom is essential to generating full turn and thus adequate power to meet your performance expectations. Keep your CHIN TALL and EYES intensely on the butt of the ball. (bottom inside cheek)

Another direct liability of this 'HEAD DOWN' nonsense is that it produces neck tightness and strain. Once the trapezoids, neck and shoulders are tight, we have a tendency to impede rotation, drop our Chin down to our 'Target Shoulder' in the Back Swing (instead

of taking or turning it up and around our Spine to a Tallish CHIN). This 'CHIN Dropping POSTURE Failure' causes far too much 'Vertical Motion in our Swing', (Steep Angle of Attack) thus the 'Clubhead' moves back from the ball in a 'Pick Up Inside Take-Away' route, with the 'Forward Tilt' which ultimately produces the 'CHOPPING Action At IMPACT'. Try it right now so you can feel the error and better eliminate from your repertoire.

It is worthwhile to consider that the '**FIRST FIVE INCHES OF YOUR TAKE-AWAY, BUILDS YOUR IMPACT**' so I think we cannot devote too much time to this very important swing-path zone. Remember that the take-away is '**LOW and SLOW**' and accomplished with the minimum amount of energy that is required to simply get the 'Body and Clubhead' into the position at the 'Top Of Back Swing'. ('TOB')

In the 'SET UP Phase of your ROUTINE' get your 'CHIN COMFORTABLY TALLISH' and keep it there throughout the smooth 'Swinging Motion right through IMPACT FOLLOW and FINISH Relaxed'. If your 'CHIN is Tallish', then you will not have the tendency to make it taller or lift your head. Once you have eliminated the 'Lifting Variable', all you will have to guard against is any 'DROPPING MOTION' which will always cause the elbows to reflex through the 'IMPACT Zone' or create 'FAT IMPACTS'.

TWO ABSOLUTE RULES of the 'I.G.A. or 555 Academy' are

- 1) **If you hit FAT you 'DROPPED YOUR CHIN'.**
- 2) **If you hit THIN you 'LOOKED UP FROM THE BOTTOM INSIDE CHEEK OF THE BALL'.**

3) **HEAD MOTIONS:**

The head can move on only the three basic 'AXES' which are the 'Vertical, Horizontal and Lateral' (Fore & Aft, Slide or Sway).

Applying this 'AXIS Data' to our body computes as follows: At 'Address FIX' our Shoulders are the 'Horizontal or Y Axis'. The Spine is the 'Vertical or X Axis'. We can move 'Up and Down the Spinal Axis', 'Around the Spinal Axis' or 'Perpendicular to the Spinal Axis' (Sway or Slide).

If your head moves '**Up and Down**' during your 'Swinging Motion' (Moving the Top Of PIVOT), you will have difficulty keeping or getting the Golf Club Head back to the 'IMPACT Fix' or the 'Set-Up Butt of the Ball'. If your head moves 'Up and Down' so will your 'Clubhead' follow the leader. This 'Vertical Axis Movement' is a 'NO-NO'. Thus you will strike the Ball 'FAT or THIN'.

If your head moves '**Forward and Backwards**' (Altering your Spinal Inclination), along this specific 'Horizontal or Inclination Axis', which is 90 degrees turned to the 'Shoulder Axis', you will move your 'Clubhead' in a proportionate manner and direction from 'IMPACT FIX or SET-UP', thus 'HEELING or TOEING your Ball'. Your 'Spinal Axis must be Stable throughout the entire Back and Front Swings' in order to get the 'Orbiting Clubhead Back to the Ball'.

Note that we have just covered four of the five 'IMPACT POINTS of a Ball to the Clubface'. The fifth is, of course, the 'SWEET SPOT' or 'OPA' (Optimal Percussion Area), that marvellous magic place where Balls '**Come off like a Rocket and feel like a Marshmallow**'!

The 'Stable Head' can and does also 'Turn' or 'Rotate around the Spine' as you keep your 'Eyes' pointedly but comfortably 'Focused on the Butt of the Ball' while making and firing your 'COIL'. You can easily Feel this by simply looking at the Butt of the Ball, which will keep your head rotationally or spatially stable, while making your 'TURN to COIL'. Your Head will still be generally facing the ball while your Shoulders will have 'Loaded' approximately 90 degrees. Thus your Head has effectively turned in the opposite direction of your Shoulders or to the 'Target Side of your Horizontal Shoulder Axis'. It's 'Net Position Change' will, however be that it is slightly turned and tilted to the 'Brace Side' at 'Full Load Coil' and NOT be pointing dead forward or 'Square to the Target Line'.

Don't get too wrapped up in this 'Physics and Mechanics' as it will all fall into place reasonably soon with proper teaching and understanding. It is NOT magic. It is fundamentals. This book's purpose is delivering 'Fundamentals' in simplicity....'Solving the Complexity Myth'.

5) **"KEEP YOUR HEAD STILL":**

Now that we have discussed the above material dealing directly with

the 'Head', I want to tell you that you should never struggle with, or even try to 'Keep Your Head Still'. It is not only 'Counter-Productive' but also the wrong concept upon which to focus.

Again, all you have to do to keep a 'Stable Head' is to keep your 'CHIN Tallish' and train your Eyes to 'See The Ball Come Off The Clubface'. Focusing your sight on the very stationery Ball (until it is struck) will take care of this 'Stability Task' without any further assistance.

Rather than spend anything but minimal time on the 'Stability Of Your Head', apply more time to understanding the stability of two other 'Body Components' so you can make the best 'Golf Procedures' possible. Be efficient in your focus.

These 'Body Components' are;

1) Your 'Stable Spine Angle' with its 'Forward Inclination' and its 'Aft-Tilt' so necessary to keep your Ball from 'Leaking To The Low ENERGY Side of the Target Line' or worse.

2) Your 'Stable Brace Knee' which contributes so greatly toward keeping your 'Spinal Crankshaft' in position. You have to 'COIL' against this 'Lower Brace Side' and without a 'Stable Brace Knee', always 'Flexed and Firm' throughout the entire Back and Front Swings, you will **NEVER** have any hope of playing 'Solid, Repeatable, Reliable Golf Shots'. THE ones you do make will have a significant amount of 'Lady Luck' in the recipe; more than you would like in a 'Winning Battle Plan'!

Without these two 'STABLE Mates', you will come to know both the true meaning and true 'FEELING' of '**Crap-Shoot or Get-Lucky Golf**'. This brand of Golf will not only test your ability to 'Score' but also to 'Bear Pain' in the form of never ending frustration.

You really do not want to go there!

5) "KEEP SWING ARM or TARGET ARM RIGID":

This misleading term generates unwanted tension.

Keep the left arm 'Extended but Relaxed' throughout the Backswing side (Segment #2, and #1) of the full swing. If you keep your focus on swinging the clubhead fully to the outside of the circle, you will maintain 'Centrifugal Force', 'Constant Radius', 'Brace' and 'Connection'. You will generate accurately applied 'Clubhead Speed' which directly produces 'DISTANCE'.

Stiffness at any point in the 'Golf Swing' creates an immediate and cumulative disability impairing the smoothness necessary to generate power and 'Clubhead Speed'. Too much 'Tetanus' in your muscles deteriorates performance. Put another way; if you are fully TIGHT through your 'Back and Front Swings', how can you make the HIT when you need it? Being in a state of 'Tonus' enables us to 'Fire' when it is time. To perform muscular feats we must relax and squeeze or relax and fire. We cannot 'Fire and Fire'. When the throttle is down it is down and cannot be dropped twice!

6) "ARM BENT AT IMPACT":

Either you are standing too close to the ball or you are dropping your CHIN during your 'Back Swing or the Pre IMPACT Side of your Front Swing'. Usually the reflexing or bending action is done to avoid striking the ground and hurting your hands. There is a physical condition called the '**SECONDARY DROP**' which is a result of this 'Swing Flaw', pronounced bending of the 'Swing Arm Elbow Articulating Joint at the Top of Swing'. This 'Secondary Drop' allows the Clubshaft to often drop right onto your 'Brace Shoulder' before it is picked up and starts the return trip. The most striking aspect of this flaw is that you are putting another 'Useless' move in what is already quite a complicated and busy physical sequence. Keep your Swing reasonably compact.

Also this 'Secondary Drop' is caused by a loosening of your 'GRIP' at the 'Top of Your Back Swing' (TOB) which is not absolutely bad as long as you can restore the clubhead and clubshaft to proper path and plane before 'IMPACT'. Do not grip too tightly during the top portion of your 'Back Swing' (firmly in the Swing Hand's three smallest fingers will suffice) or you will destroy a good 'Free-Wheeling Swing' that is so wonderful to watch and even better to experience. With too much tension or tightness in either hand, you

will lose the Clubhead Feel. Feel the Steel!

7) **CHIROPRACTIC:**

"The GOLF SWING is bad for your back."

I think that the 'Proper GOLF SWING' is an excellent chiropractic exercise without specific risk to your back. My views are held by many who bear that professional title. Remember that your swing is founded on good feet which are the 'Pedestal or Foundation of the Athletic Move'. Initiate your 'Swing From the Ground Up and From the Inside Out' and 'Feel' like you are 'Swinging the Arms (Lever Assembly) with the Body'.

Note in a well executed 'Golf Swing', the 'Maximum Rotation Differential' ('MRD At TOB') between your Shoulders and your Hips is generally not more than 45 degrees and this is NOT under any undue stress or impact; simply smooth 'LOAD or COIL' followed naturally by 'Un-LOAD and Un-COIL'. Our Spines can handle this light shock quite well. It is worth feeling this proper move. Un-COILING or turning back forward, our 'HIP AXIS' and our 'SHOULDER AXIS' are very close to 'Parallel at IMPACT' or become more 'SQUARE to the Target Line' again while we properly complete out 'Forward Swings' with our 'Shoulders and Hips' still being relatively Parallel to eachother. I meaningfully say 'Relatively'.

This is not a damaging relationship or position. We hurt our lower or 'Lumbar Spine' when we resist or destroy the 'Flowing Movement' of 'Turning In and Out' through the entire back and forward segments of the swinging motion. Damage is generally induced by 'Tension' or too much tightness in our hands, arms, shoulders, backs, butts and legs. In a smoothly 'FINISHED Golf Swing' we should complete with our belt-buckles, Tummy, Chest and CHIN pointing generally at the Target - Pin. With the optimal 'Swing PLANE and Clubhead PATH', our Elbows will also be pointing at the Target - Pin.

Make sure you can identify and 'Feel This FOLLOW - FINISH Position'. Push the 'ENTER Key' in your mind and save the 'Position Feel' so you can 'REPEAT' it; so you can get back to it comfortably and reliably.

Swing to your 'FINISH POSITION' and if you 'Hold It' even for an extended period of time (10 -20 seconds), it should not become

uncomfortable at any place from you 'Toenails To Your Fingernails'!

8) "STAY BEHIND THE BALL":

This specific terminology as an instruction to a student, if one is not very careful in its explanation, may promote falling back or staying on the 'Brace Foot and Side' causing 'THIN and TOPPED Shots'. 'Staying Behind the Ball' (deliberately) tends us to make us hit 'Under and Up instead of Down and Through the Ball'. This 'Lifting Moment' in the Front Swing THROUGH the IMPACT & SEPARATION Zone' is a poor 'Procedure'!

'Staying On The Back Foot' reduces or stops the 'Spinal Turning Motion' essential to the pure objective of 'Swinging The Clubhead'. We end up in the counter-productive 'REVERSE C' or 'Reverse PIVOT' which is a good way of injuring a sound back. The 'SWAY & SLIDE' can be caused by this type of miscommunication as well.

A good freely 'Swinging Clubhead', hitting at the bottom through the 'IMPACT & SEPARATION ZONE', naturally (Newton's Laws of Motion) works every time. '**For Every Action, There Is An Equal And Opposite Reaction**' without proper 'Uncoiling' or 'Turning' causes the head to stay behind the ball or 'Point of IMPACT' and beyond. We need to promote 'Primary Swing Elements' and allow the secondary results or effects to simply happen. Having your 'Head Behind the Ball at IMPACT' is the result of a good naturally created 'Swinging Motion'. Do some '**TICK TOCKS**' and feel that your head will be 'Behind The Ball Through IMPACT' as you desire.

I think we golfers far too often 'Over Think' our Swings and preclude or prevent our 'Subconscious Mind's' directing the great Swings we inherently have in ourselves.

Remember, 'SET-UP' or preparation is accomplished in the 'Conscious Side of our Brains', while the 'EXECUTION' takes place or is commanded from the 'Subconscious' side.

DO NOT INTERFERE with this MACRO COMPUTER signal or direction. If you do so, the result will be a 'Broken Down Swing'.

9) "KEEP YOUR HEAD BEHIND THE BALL":

As above, this term mechanically and consciously makes us hit into

the counterproductive 'Reverse C' (bowed lower back posture) which is not only bad for 'Ball Flight' but downright dangerous to our lumbar disks. (It makes me hurt just thinking about it)

The term '**Keep You Head Still Or Behind The Ball**' is not much of an improvement over the '**BEHIND** and **DOWN**' terms.

If one tries to 'Lock' the head into position as this misleading term suggests, you will tend to shift into a 'Forward Spinal Tilt' on the 'Back Swing' while producing the 'Reverse C' or 'Pivot' on the 'Front Swing' and this will inhibit your 'Finish or your Follow-Through'. The head must 'FLOW' with the Spine during the 'Golf Swing' if you are to maintain comfort and produce any 'Power' with which to produce distance and control.

The Head, as thought by some, does NOT lead the Body. If one simply does the '555 TICK TOCKs' there will be a feeling of fluidity with the 'Head Floating Freely', moving laterally on top of the Spine where it carries the nerve and brain centre comfortably guiding the entire GOLF operation.

10) "SLOW YOUR SWING DOWN":

This is advice given often to golfers by both Pros and just others trying to either help (and hopefully not just to impress) when they see an apparent fast swing. But is this 'Too Fast Swing' really what they are seeing? It takes a sensitive and trained eye to come to correct conclusions leading to effective solutions.

I think generally it is FAST they see but FAST is NOT the problem. It's 'INADEQUATE DURATION'. Their Swing is NOT FULL or has been 'Abbreviated' from their specific 'Optimum Swing Length'. Remember, 'Clubhead SPEED' applied 'SQUARELY' to the 'Butt of the Ball' is the '**PRIMARY IMPERATIVE**' of GOLF so we do not, under any circumstances, want to deteriorate this primary physical aspect.

One must always relatively '**Complete One's Back Swing**'.

No Wind-UP or SPEED....no GO!

Consider this for a moment. Your spouse, or just a self-serving personal urge, asks you to make a trip to the local corner store to pick up some groceries. If you only get 'HALF-WAY THERE' you are

coming home without the groceries. But this unsuccessful trip is FASTER than making the full trip and getting the groceries. The 'Less than Full Trip DURATION' is shorter than a 'Full Trip DURATION'.

Don't think or listen to advice to 'SLOW YOUR SWING DOWN'. The observation was a quick short abbreviated swing. Your swing did not go 'BOTTOM TOP BOTTOM'. It was not a 'Full Swing' and thus it seemed quick because it took less time than one might have liked it to require. What is needed here is to make a 'FULL TRIP' with your Clubhead and it will take more time, give you a better power delivery and produce better results.

The 'T.O.B.' occurs when your 'TURNED or COILED Target Shoulder' makes contact with your 'Stable Tallish CHIN' and your 'Wrists are Cocked'. This occurs when we say the 'Trigger Word' '&' in our 'Trigger Word Sequence' '**SWEEP & SEE-IT, BALL - PIN**'

"Don't '**DECELERATE**' on the way down and through the ball" is another very common instruction. On the one hand you are told to Slow Your Swing Down and, soon after you are instructed 'Don't Decelerate'. Slow Down! Speed Up! Make up your mind! I'm getting confused! Never 'Decelerate'!

Remember there are only '**TWO SWINGS IN YOUR BAG, THE FULL SWING and THE LESS THAN FULL SWING**'. The latter always seems faster because it may be ever so slightly, but not much. 'Physical Swing Analysis' has brought to light that the 'Swing Duration' of a 'Full Putting Swing' is virtually the same as that required for a 'Full Driver Swing'. Interesting? Try it and Feel it for yourself !

With the 'Full Swing', you always have to put the '&' in at the 'TOP Of BACK SWING'. (see TRIGGER WORD SEQUENCE)

11) "CLUBHEAD DIRECTION CHANGE - TRANSITION":

If you are backing your car down a dead-ending, deserted country road and come to the end, you will simply want to change directions so as to be able to precede. To do so you must STOP, shift gears and then proceed in the opposite direction.

I think this is relevant to this evolved GOLF term 'Pause At The Top'. In all golf swings, one changes direction and proceeds basically along only a slightly different path, or lane than the

one arrived on. Likewise the direction change involves 'ZERO CLUBHEAD SPEED' and everything else attached to it comes to a 'STOP'. To 'Change Directions' we must necessarily 'STOP'.

A stop is unarguably a serious 'PAUSE'.

I think the word pause, although well-intended, is the wrong manner or communication with which to accomplish what is an ill-conceived task, this 'Pausing at the Top'. The real objective is simply '**TO GET TO THE TOP OF BACK SWING**' which will overcome what is often referred to as 'Being Too Quick' as in the above mentioned 'Slow Your Swing Down'.

The I.G.A. 555 Golf '**AND**' word, forming a very key part of our 'Trigger Word Sequence', accomplishes all the goals in one succinct instant and does so precisely and naturally.

12) "**PAUSE AT THE TOP**" ('The Transition'):

Simply put, the little '&' word takes care of that event!

I do not favour the term or often taught concept of the 'Pause At The Top' as it tends to interrupt the flow of the swinging motion. 'A Full Swing Is A Full Swing' and if it comes to a stop or completion part way, it is then NOT a swing. We all know that the swing changes direction at the top and in order to accomplish this physical reality, the clubhead has to stop. I think a stop is a very positive pause.

Swing slowly and hit hard. Complete your 'Back Swing' with 'Low Energy', '**LOW AND SLOW**', all the way 'Up and Back'. The only task is to get the Clubhead to the 'TOP of BACKSWING' (TOB) and there is 'No Throttle Required'.

BACKING THE CAR OUT OF THE GARAGE:

(remember?)

When you back your car gently out of your garage into the lane you do so with little or no throttle while smoothly turning the wheel so as to get the rear-end of your car, the back bumper, pointing down the lane. You do this looking in the rear-view mirror or out the back window with your head turned or coiled. The 'Backing Up' (Back Swing) accomplished, automatically positions your headlights

or front end to proceed with whatever haste and power you desire.
(Frontswing)

Once in the back lane and properly positioned, now, TURNING and UN-COILING, looking out of the front wind-shield, step on the gas as hard as you desire without squealing the tires. In Golf we call this 'Spinning Out', which like the car, causes lost control and ending up over the neighbour's fence.

A good Swing is the 'ONLY trusted method of Maintaining Control' of the 'Clubhead ORBIT or PATH' and even 'Clubface AIM'. This foundation makes it possible to control the 'Clubface AIM' without the common use of 'Manipulation'.

13) **"WATCH YOUR CLUBHEAD":**

I have heard people giving advice to 'Watch Your Clubhead' during the takeaway and I have seen people doing it.

This practice is not sound, in fact it is downright wrong and if you are getting caught up in this error, you will already be paying the price for it's flaw.

Watching this moving object will cause your head to become very unstable along with your shoulders making striking the stationery Ball with any reliability quite impossible. Depending on how far you turn to watch it, you may even discover a sore neck.

Nevertheless, simply keep your eyes on the '**Bottom Inside Cheek**' of the Ball and '**See It Come Off Your Clubface**' so that '**IMPACT**' can be assured.

Just to keep this very 'Personal Game' in perspective, I know quite a fine Golfer who turns his head to look at his Clubhead at about it's 9:00 o'clock position every time he swings. His Routine is stable and he gets his eyes back on the Butt of the Ball directly after his glance so that it does not cause any marked deterioration in his performance. If it ain't broke, don't fix it! All I did was tell him of the bad vibrations he continually sends through my old teaching body while letting him know how I enjoyed his control and being his partner!

With we humans there are constant exceptions to every rule but it is best not to test sound practises all too often. There is always

an eventual price when the chicken comes home to roost.

'When it comes to some of these Golf Terms
being repeated over and over...

I plead CONTEMPORARY insanity'.

Q8)

"All my life I wanted to play like Jack Nicklaus,
and now I do."

Paul Harvey

(said the day after Jack shot the 83 in the 1981 British Open)

IT MAKES YOU WONDER HOW SOME PEOPLE SURVIVE?

1) Recently, when I went to McDonald's I saw on the menu that you could have an order of 6, 9 or 12 'Chicken McNuggets'. I asked for a half dozen nuggets. "We don't have half dozen nuggets", said the teenager at the counter. "You don't?" I replied. "We only have six, nine, or twelve", was the reply. "So I can't order a half dozen nuggets, but I can order six?" "That's right." So I shook my head and ordered six McNuggets.

2) I was checking out at the local Wal-Mart in the express lane with just a few items. The lady behind me put her things on the belt jammed right into mine to mine. I picked up one of those "Customer Dividers" that they keep by the cash register and placed it between our things so they wouldn't get mixed. After the girl had scanned all of my items, she picked up the "Divider", looking it all over for the bar code so she could scan it. Not finding the bar code she said to me, "Do you know how much this is?" I said to her "I've changed my mind, I don't think I'll buy that today." She said "OK", and I paid her for the things and left. She had no clue as to what had just happened.

3) A lady at work was seen putting a credit card into her floppy drive and pulling it out very quickly. When I inquired as to what she was doing, she said she was shopping on the Internet and they kept asking for a credit card number, so she was using the "ATM Thingy".

4) I recently saw a distraught young woman weeping beside her car. "Do you need some help?" I asked. She replied, "I knew I should have replaced the battery to this remote door un-locker. Now I can't get into my car". I asked, "Do you think they (pointing to a distant convenience store) would have a battery to fit this?" She thought and said, "Hmmm, I dunno!" "Do you have an alarm, too?" I asked. "No, just this remote thingy", she answered, handing it and the car keys to me. As I took the key and manually unlocked the door, I replied, "Why don't you drive over there and check about the batteries. It's a long walk."

5) Several years ago, we had an Intern who was none too swift. One day she was typing and turned to a secretary and said, "I'm almost out of typing paper. What do I do?" "Just use copier machine

paper", the secretary told her. With that, the intern took her last remaining blank piece of paper, put it on the photocopier and proceeded to make five "blank" copies.

6) I was in a car dealership a while ago, when a large motor home was towed into the garage. The front of the vehicle was in dire need of repair and the whole thing generally looked like an extra in "Twister". I asked the manager what had happened. He told me that the driver, while on country route #24, had set the "cruise control auto pilot" and then went in the back to make a sandwich.

7) My neighbour works in the operations department in the central office of a large bank. Employees in the field call him when they have problems with their computers. One night he got a call from a woman in one of the branch banks who was downloading from the mainframe. She had this question: "I've got smoke coming from the back of my terminal. Do you guys have a fire downtown?"

8) Police in Radnor, Pennsylvania, interrogated a suspect by placing a metal colander on his head, yes, a simple large bowl-shaped spaghetti strainer, and connecting it with an old twelve-foot extension cord to a photocopy machine. The message "He's Lying!" was placed in the original bay of the copier. When police pressed the copy button each time they thought the suspect wasn't telling the truth, that message slid out of the machine. Believing the "LIE DETECTOR" was working, the suspect confessed.

9) A mother calls 911 very worried asking the dispatcher if she needs to take her kid to the emergency room? The boy had stupidly been eating ants. The dispatcher told her to give the child some Benadryl and he should be fine. The mother said, "I just gave him some 'Black Flag Ant Killer'" Dispatcher: "Rush him to emergency!"

10) A patient having severe bursitis in his shoulder joint (painful 'Range Of Motion' problem) was explaining to his doctor that he had lost the ability to elevate his elbow and hand above his head. The patient struggled, groaning painfully, to lift it even to his armpit. The doctor continued to ask him about his prior history and ability. The invalid cooperatively proceeded to easily lift his arm and hand right above his head and then dropping it back to his lap, saying, "There was never any problem before last week, but today (groaning loudly as he struggled to raise it again) I cannot get my elbow to my shoulder!"

RED RULE #21

The 'ONE INCH' Rule

FOR EVERY FOOT YOU DESIRE TO ROLL THE BALL, TAKE THE CLUBHEAD BACK 'One Inch Per Foot' and then ADD ONE MORE INCH FOR THE BACK OF THE CUP.

'Weight or Distance' in Putting is the greater task than 'Aim or Direction'. Add the 'One Inch for the back of the Cup' so you do not suffer the frustration of coming up 'One Inch Short'!

There is one more small consideration, '**SLOPE**' :

- a) When '**UPHILL**', add one or two or three inches for the 'Slope' and 'Grain' if any exists.
- b) When '**DOWNHILL**' subtract one or two or three inches for the 'Slope' and 'Grain' if any exists.

As your 'Putting Mechanics and Routine' evolve, purify and simplify, as you become more 'Machine-Like', 'Putting' is virtually just a matter of 'Reading Greens' properly!

This 'One Inch Rule' is very companion to the 'Seventeen Inch Rule'. They both mean we have to get the Ball all the way to the Cup and slightly beyond to 'Give It A Chance To Go In', even if 'Dying in the Hole' is the ultimate condition.

See Chapter 'PUTTING'

Q9)

'The old age of an eagle is better than the youth of a sparrow.'

Greek Proverb

(Old golfers who score well need not necessarily swing big sticks and hit long balls.)

..... speaking with some authority!

Q10)

'No one grows old by living,
but
more by losing interest in living.'

(Golf should be your 'Spark in Life')

Q11)

'Everyone desires Long Life.
No one desires Old Age.'

Jonathan Swift

(Those in their 'Golden Years' age and mellow better with the 'Companionship of Golf' than without this provocative 'Mistress'.)

C5]

REASONS WHY THEY THINK WE ARE CRAZY

The world is a very big place made up of an enormous diversity of creatures, animals and beings. This theatre full all have habits and behaviours they each think are right! What potential and opportunity! Scary! Risky! And true!

- 1)A pizza gets to our house faster than an ambulance.
- 2)There is handicap parking in front of skating rinks.
- 3)Drug stores make the sick and infirm walk all the way to the back of the store to fill a prescription while healthy people can buy cigarettes and coke at the front.
- 4)People order double cheeseburgers, large fries and a diet coke.
- 5)Banks have two sets of front doors unlocked and open and then they chain their pens to the counter.
- 6)We leave cars worth thousands of dollars in the driveways and put our useless junk in the locked and alarmed garage.
- 7)We use answering machines to screen our calls and then have 'Call Waiting' so we won't miss calls from strangers.
- 8)We buy hot dogs in packages of ten and buns in packages of eight.
- 9)The word 'Politics' describes a crazy public process. 'Poli' in Latin means 'MANY' and 'Tics' are 'BLOOD SUCKING CREATURES'.
- 10)We have drive-up 'ATM' machines with 'Braille Lettering' on the driver's side.

11)The Federal Reserve and U.S. Treasury have 'In God We Trust' written on our almost worthless, unbacked paper money that so perversely supports that huge, hungry, so often useless, gigantic secure exploding bureaucracy that misguides around the globe. Almost masochistic, don't you think? Paying for pain!

12)We treasure our 'Freedoms and Privacy' while there are video cameras on every street corner, we use credit cards many times a day and we carry cell phones everywhere we go.

13)The U.S. government overtly funds Saddam Hussein and Bin Laden billions of taxpayer's dollars to become backyard bullies and then we spend billions more after we declare war on them. Looks a bit like a 'Make Works Project' to most thinking beings.

14)Good citizens legitimately complain about the usurious price of gasoline yet willingly pay more for 'Bottled Water'.

15)Citizens are heavily taxed for cigarettes and 'Clean Air'.

16)Good folks die of cancer and similar disease while the FDA approves such products as 'Aspartame', 'Saccharine', 'Margarine' and 'Chemical Food Preservative' that, taken separately, are lethal.

17)Respected politicians parade the 'Bill Of Rights' and our 'Constitution' while working daily in contrary manners.

18)We trust our infants daily to strangers in tax funded 'Day Care Centres' so Mom and Dad can go to work to pay more taxes.

IN PERSPECTIVE

Just before we proceed into the subject of 'Modern Equipment or Tools', I simply want to mention that Sam Snead and others regularly struck Golf Balls over 300 yards in tournament play and consistently moved them in excess of 280 yards over 40 years ago.

Remember, a yard was 36" then as it is now and he accomplished the feat with 'Era Golf Clubs and Balls'!

Life on the links is certainly 'Different Today' but really 'How Different'? How purely different are the bodies and minds?

This information is supported by the movie archives.

CURIOSITY:

What if we could provide 'Slamin' Sammy' with the same sports fitness professionals as used by Greg Norman, Jack Nicklaus, Davis Duval, Gary Player, Larry Nelson, Tiger Woods?

What if we turned back 'Father Time' and could put into the hands of 'Old Tom Morris' a new 'Kevlar Composite-Shafted Titanium, miraging, liquid-metal, deep-faced, diamond-faced, wide-bodied, high-modulous, mid kick-action, over length Golf Club and even an average tour Ball?

Thought you might find this beneficial in keeping 'Things Golf'

'IN PERSPECTIVE'.

ABOUT THE MODERN DAY EQUIPMENT CONTROVERSY

The following is a bit political but I and many of my colleagues have strong feelings about the equipment subject. We may be impotent in the eyes of the major manufacturers, but our sincere concern for the game and all its participants reigns supreme. This may be my little 'Kick At The Cat' in the 'American Entrepreneurial Marketplace', with my feet tied together, voice falling on deaf ears, but "All we need in these great countries for Evil to triumph is for enough good men to do nothing". This equipment issue is of significant importance. 'Golf' is more than an industry! The 'Feeling' I have in writing these few pages is very 'Philosophical and Caretaking in Nature'. This 'Great Game' both needs and deserves our full attention so that it stays well enough to absorb our 'Passion'.

We have all heard about 'Tools' either in-short or in-depth and the topic is not going away quietly. It is money-driven and some of the key players have the budgets, already gained from consumers, adequate today to apply sums of money in excess of \$50,000,000.00 annually in promoting their ideologies and wares. Consumer mental conditioning or 'Brain Washing' is not a new skill but it is a reality. Manufacturers need to develop new models and styles to make the last year's obsolete in the eyes of the 'Trend Chasers', those people who just have to buy the latest and the greatest based not on testing but on the words of those who make the products. Thank the good Lord for enterprise and jobs, but

Recently, there has been more 'Driver Clubhead Go-Arounds' and, just like in commercial aviation, sitting in front of a plane load of nice folks wanting to 'Arrive' (safely of course), '**GO-AROUNDS**' are a distinct waste of 'Fuel Energy and time! When the aircraft in the 'Terminal Control Area' are all 'In Sync' the game goes smoothly. If not, we are all in for some 'Vectors and Holding Patterns' which are generally unnecessary.

I too recently watched the televised debates between the two opposing factions on the 'GOLF CHANNEL' and could not resist recognizing the absolutely huge advertising value gained by the manufacturer who was one of the key-note speakers or proponents. He had nothing to lose and was gaining moment by moment. It was entertaining to say the least. After all, the guests were not

really 'Opponents' but just industry entities both working for payment or hire. The overriding issue here, or in the 'Game' is 'Pleasure and the Avoidance of Slow Play'. Two standards for equipment solves neither of these issues. Even in the Indianapolis 500 there are very important 'Fuel Induction Restrictions' that make for fairness.

The question is both 'Where do we stop?' and 'What are the standards?'.

The mitigating circumstances here, the focus, must be 'Affordable Practicality' which includes 'Land Use Efficiency' that affords reasonable green fees that tend to be unreasonable for the average very deserving folks who want to but can't; who should be able to but aren't!

Somehow, Golf's sound thinkers, must provide guidance that provides stability from the top to the bottom. Consistency afforded by the 'Rules' has never failed and 'Double Standards' are sheer error. We are a nation that strives, at least on the surface, towards equality. Let 'Golf' have the privilege of suffering this fate!

I think the 'R&A and the USGA' (PGA) need to get 'On The Same Page' without any further delay.

Then the manufacturers need to follow these unified governing bodies lead. The thinkers must get it right!

In the interest of efficient land-use, the many existing great golf courses must remain statistically capable of hosting 'Tour Events' rather than having some every year fall by the wayside because the 'Ball and Stick' are getting too long for these superb 'Grand-Father Courses'. They can no longer handle the 'Fire Power'. In the same 'Land Use Interest' we should not have to build 7500 yard tracks for any reason.

Playing Golf 'A-Foot' is still a core issue. Fitness and Fresh air! If we continue evolving towards 7500 or even 8000 yard pitches, walking will be a dinosaur gone extinct. Personal wellness is central to the 'Game' and this aspect needs protection. Today the industrialists make golf power carts that are only generally necessary due to the length of the courses. What about good health and exercise that is so preached by the 'F.D.A.' and all its associates. Are we really concerned about 'Fitness' or not?

What about the fate of 'Caddies' who traditionally provided a foundation for youth's learning and appreciating the 'Game'? Manufacturers have effectively replaced this great aspect with machines and computers, perhaps leading us ever closer to the need for artificial hearts and lungs or shorter lives? A personal concern, being one member of a very large family of medical practitioners, is that the quality of life must be affordably enhanced for the average citizen and not just those capable of affording care. Fitness is the cornerstone to the avoidance of costly medical care which put the nations number one 'Elitist Commodity' out of reach; health and medical care. 'Life Long Leisure Skills', burning fuel (provided by natural food stuffs) in the presence of fresh air and clean water is a priority. This 'Golf Equipment Controversy', as distant as it may seem, is not at all removed from the heart of the global issue.

MY STANCE:

Cool off 'Hot Balls', restrict the 'Techno-Grind' of 'Golf Clubs' to existing standards and keep the 'Tees Where They Are' because the long-ball hitters will not be coming at as many greens with wedges. For those who are not in this 'Skill Category' today, they are not going to be tomorrow either so 'Get Off the Tips and Stay Under the Clock'. Timing today is a simple useful reality that can be assisted by good 'Golf Professionals' who have learned to correctly manage their starters and marshals. I want to tell you that our courses (as long as any) simply did not allow 'Hackers' to go off the tips. If they tried to fool us, they were adjusted by the 'Local Property Rules' and did so generally in good behaviour. One bad group slows up the entire course and this was simply not allowed under any circumstances.

Two important points: 1) No one likes five hour rounds so all are willing to do what it takes to prevent these. 'Ready Golf' is a great discipline. 2) Those who foolishly elect to play from the 'Tips' really do not like the pain that is self-inflicted. It is far better to brag (honestly) about a good score from the Whites or Blues, than to lie about your score from the tips. There is always one person to whom you cannot lie; 'Yourself'. Having played an enjoyable round with relatively good scores is always better than the alternatives.

'Cooler Balls and Clubheads' will put absolutely no one to any disadvantage. I heard the proposal recently that we allow two

standards of equipment; one for tournament players and another for everyone else. What utter garbage!

So you get a Pro-Am. Now what the heck are you going to do? Mixing gasoline and water still affords one hell of a blaze if you have enough of the former.

By the way, who is going to monitor the equipment? I just 'Logged Onto the Internet at 'USGA.org' to check the list of 'Non-Complying Drivers'. I have been both building and studying these 'Big Tools' for years and can assure you the list was daunting. Do you, in your wildest dreams, think any starter is either knowledgeable enough or willing to take on this task of sorting out as many as 150 foursomes clubs a day? Do you think the 'Games' average players can and will do so on their own? More conflict means less 'Pleasure'. And so goes the 'Great Game of Golf' as society goes!

POLICE STATE OF AFFAIRS:

"Sir, would you please pull over to the side of the cart path? License and registration! Certifications and Proof of Compliance! By the way, due to the complexity of and enforcement of the Rules, we no longer allow any 'Custom-Component Equipment' (which includes custom reshafts). Three of these four drivers will have to be taken out of your bags before you are allowed to proceed with your round! Please return to the parking lot and we will attempt to fit you back into the sequence when you return. By the way, there is no guarantee."

Let us do what is smart and good for the game. Let us produce complying products that adhere to beneficial standards.

HANDICAPPING:

This great system which is the 'Backbone of the Game', levelling the playing field for all those 'Playing off other than Even', needs to be allowed to do its job. Are we to suppose that those 'Single Digit Players' mixing it up with any tour player, play even with the 'Tour Player' because they may or may not be using 'Non-Conforming Equipment'? That ought to be worth watching! The size of the wager will determine the number of 'Armed Officials' needed to keep the 'Once Gentlemen' from each other's throats. The 'Tour Players' will still win!

We relatively recently got the 'Course and Player Indexing Methods' stabilized. Now we are inviting yet another factor such as 'What Clubs are you playing and how are they rated?' which you may NOT be able to play in this event. This is a 'Huge Can Of Worms' which is not in the best interests of the very basis of the 'Game'. We good old ordinary nice folk who have discovered the enormous 'Pleasure' available from this 'Silly Game we have come to call Golf' will find less 'Pleasure' and more 'Controversy'. Who is going to abide by the 'Rules' when they are more complex than they already are? This 'Hot Equipment' is just salt in an open wound.

There is but 'One Winner' in this 'Industrial Scenario' and it is NOT the consumer! The only winner is the manufacturer who has to keep the moving target moving, just as the banks need money to be flowing since they profit by 'Money Movement' in either direction, positive or negative. The 'shareholder first' manufacturers must serve selfish goals which are not necessarily in the 'Golfers Best Interests'. Every year I can remember, and I have a good memory, there have been, for example, Drivers that made the great 'Tools' you bought one or two or three years ago, obsolete, either in pure 'Performance' or in 'Appearance'. Reminds me of garment styles which also change every year in 'Golf' as well.

I actually think that 'Golfers' are too smart for this nonsense. We North American occasional athletes can see the unfolding theatre and really will not embrace it, although, if the 'R&A and USGA' fail their legacy, we will eventually slip into the abyss.

This 'Double Standard Golf Club' proposal, insidiously driven by the manufacturers, is without real value to the 'Game Of Golf'. I have described some of the 'Land-Use Pitfalls' above. Unless we are fully willing to contribute to the 'GDP' and 'GNP' (corporate profits) more than to our selfish 'Pleasures' to be found in the 'Perhaps Slightly Modified Traditional Structure of Golf', we are headed in the wrong direction. The panacea of two standards of equipment is pure institutional folly which will never level the 'Playing Field' as well as the already existing and proven methodology that governs one standard for equipment with varying 'Teeing Grounds' and 'Handicapping Systems'. Those who do not strike the Golf Ball to its maximum 'Distance' must exercise more skill in striking it more accurately in the 'Direction' category. Those who want to 'Score Well' will always wisely chose the 'White or Blue Tees' from which to play and will have honed their 'Short Game Skills'. Knowing that 75% of all strokes are made inside the 'Full-Swing Pitching Wedge' should send a message!

Do you think you can out-drive John Daly with any 'Tool'? Those who strike 'Golf Balls' with maximum 'Clubhead Speed' should and will always be rewarded, regardless of the equipment. The level playing field has been accomplished by 'Varying Tee Boxes' and by carefully designed 'Handicapping Methods'. 'Non-Conforming or Non-Standardized Equipment' has no place in the current strategy and long-term well-being of the 'Game'. This 'Open Competition' should be left to the development of 'Skill' applied to 'Universal Tools' and nothing more.

Unless I have missed something, all these 'Space Age Drivers' cost \$450.00 to \$500.00 U.S which is about as far from the 'Best Interests Of The Average Golfer' as a 'Ferrari' is to the average commuter!

IN CONCLUSION:

The pros will always strike the 'Ball' better than hackers. This is a permanent reality. Therefore, on any quality course they should begin the hole from a teeing ground farther from the target. The traps and hazards should be placed where they feel the fear and the 'Sunday Swinger' cannot reach them! The Balls must be 'Cooler' for all. I would suggest that the biggest hitters not be able to get past 290 yards. This is essential in forcing people to make great long iron shots to greens and not just this constant wedging in. We must place more importance on great long-shafted work off the tee boxes. Laying up should be essential at some place on every course. There must be deep rough in places. Doglegs are an integral part of any great course. This has a tendency to take the driver out of many or most hands and forces the player to do some really practical math. (see 'The Pitching Wedge Rule') Strategy must not only be promoted but preserved. We must be rewarded for learning and applying optimal 'Course Management'.

Golf is a thinker's Game! As soon as we diminish that aspect, we compromise the challenge, the integrity and the magic. Mediocrity always slides into greatness through the smallest of crevices. It is up to all of us leaders to protect this marvellous institution that has evolved as a 'Game', even though it has a 'Four Letter Word' as its name! Spelled backwards it is 'FLOG'! How often appropriate!

LEVELLING THE PLAYING FIELD:

The 'Handicap' is truly a ground smoother. It enables the 'Sunday Hackers' to compete with real players. Wonderfully sociable characteristic! There really is no game quite like this 'Ball & Stick' silliness.

The equipment, 'Golf Balls and Clubheads', must be uniform for all.

"What about us average earthlings who want to hit the Golf Ball miles"? Well it is all relevant to the 'Target Location' isn't it? You are going to have to take your medicine and play from the closer tees! To beat the player you have two choices, get better or utilize the handicapping system which has two aspects; 1)Play from more forward teeing ground so you have less distance to cover, or 2) utilize the handicap system that provides you the legal ability to adjust your 'Gross Score' to a 'Net Score'. Regardless, no hacker should ever stand beside the professional at the 'Championship Tees' and I quite candidly think these professionals should politely suggest any misguided dreamers 'Step Forward'!

I and my staff do it all the time. Exercising leadership requires some tact, but 'Golfing Professionals' must have that ability or learn it! The marshals should be informed who is playing from the 'Tips' and enforce it.

As I said above, our courses categorized the guests according to 'handicap' and they were started by our staff on the forward 'White Tees' or the next 'Blue Tees'. The 'Black' and the 'Gold' boxes were reserved for those who had earned the right and ability to use them during ordinary play while getting around in about four hours or less. No one I know likes the freeway's becoming a 'Parking Lot'! IT produces 'Road Rage' and 'Psychosis'! There are solutions that must be recognized and implemented by the course owners and managers. With our starter control criteria, we got the occasional complainer, but they scored better from the forward tees and then could tell the better true story based on this personal performance. How many people do you know who would rather tell about a 95 than to brag gently about their 89? We helped every day! It was a great management decision which increased our traffic! We made more money because our guests played better golf and had more fun. Insist on it!

TEE DANCE

Firstly, I want to acknowledge the highly polished and very respected writer, Mr. George Pepper of Golf Magazine, for the following very interesting excerpt from his writings. I think it could be called '**A Little Different Spin!**'

This article was stimulated by George's relationship with Mr. Chuck Yash, former President and CEO of Taylor Made. They formerly worked together at Spalding. Wouldn't you like to listen to their stories? They, good friends, came nose to nose when George wrote, "I will play any given (i.e. "free") ball because I hit them all about the same". I guess they got over that hurdle!

George, who had test-driven about every wood and iron that arrived on the scene and became rather blasé about equipment claims. Aren't we all? Unless you believe all the hype! George wrote, "I can't help thinking about Bobby Jones. Seems to me, if he could shoot in the 60's with hickory shafts, then talent is more important than titanium."

We all recognize the technological advances in equipment but '**You Cannot Buy A Swing!**'

George bought a new 'Taylor Made Titanium Bubble Burner Driver' and wrote Mr. Yash about it gushing with praise. There must have been some surprise on Chuck's face!

"When I saw that letter," Yash said, "I figured I had taken Taylor Made about as far as I could. There were no more mountains to climb!"

With all the clamour about and early success with the 'Bubble Burner' George ended up sticking it in his closet or the corner of his garage. Then, after a tip from Martin Hall of Nicklaus/Flick Golf Schools it was revitalized. He say "It came out firing and has not let up since!"

When George bragged about his new found weapon to David Fey, Executive Director of the USGA, it evoked this question. "Sounds good, but how long have you been using the club?"

"About a month," George replied. "Why?"

"That means you have about two good weeks left," he said. "You're still within the 45 Day Rule."

"What the hell is the 45 Day Rule?" George asked.

Yash replied, "It's based on a theory of human kinetics that claims you have an extended honeymoon with a golf club but the magic won't last forever," he said. "Frank Thomas can tell you about it."

George reports that, "Thomas, the USGA's Technical Director, did indeed tell me all about it. According to him, there is little or no technical advantage in the current wave of oversized heads, space age materials and the light-weight shafts."

"Let me put it this way," he said. "We at the USGA are concerned about any technology that will give golfers even one more yard off the tee - yet we are not concerned about any golf club currently on the market."

"Why then," George asked, "are so many golfers - including me - convinced they're hitting the ball longer with the latest generation of drivers?"

"Because they **ARE** hitting longer," said Thomas, "but that distance is coming from the golfer's themselves, not the clubs. It's the placebo effect. These clubs are better because the golfer thinks they're better! The only true advantage comes with their longer shafts - clearly, the average guy will get more distance from a longer club. (if he can manage to swing it) But along with that (distance) will come a loss of accuracy, so fundamentally there's no threat."

What happens, according to Thomas, is that golfers go through a sort of courtship with a club. We try a shot with a friend's club, become enticed by the whack it produces and then plunk down \$350.00 or more to buy the weapon.

Then we rush to the practice tee and belt out a bathtub full of balls. The results invariably include a few tape-measure blows mixed in with an assortment mediocre hits and horrible misses. But we look past the bad shots in an effort to rationalize our investment. This is the denial phase that follows any major purchase. After all, even the most dissatisfied new-car owner, when asked how he likes his acquisition, will profess unmitigated delight rather than admit "**Its' a lemon and I'm a naïve idiot.**"

So we begin the marriage with a determination to be happy and a sweet if selective memory of titanic test clouts. This engenders a sense of confidence. That confidence produces a series of smooth, fearless swings and those smooth fearless swings produce a series of long, straight shots. The long, straight shots yield more confidence, more good swings and more great shots.

Our fondest wish, of course, is that this blessed spiral will last forever. But eventually, we develop too much confidence, swing with too much gusto (and 'TENSION') and our long, straight ball becomes a long crooked one. Then the confidence wanes, the frustration grows, the swing quickens, the shots spray and suddenly our wonder club isn't so wonderful.

But hey, it's all part of golf's enchantment - and it's great for the golf equipment business. Over the past 30 years, I'd guess I've done this desperate dance with half a dozen or so drivers and, with the grace of God (and the club makers) I plan to tango with at least a dozen more!

Thanks George Peper for that taste of truth!

PS. We all hope David Fey and his cohorts have the courage and foresight to '**Cool Down The Golf Ball**' before every 6500 yard classic course is obsolete. What a waste of marvellous real estate! The length of the 'Shaft' is really of very little consequence as poor technique makes performance with longer sticks very challenging indeed! The '**Frustration Quotient**' will decommission these weapons sooner than later. The only real problem with 'Length Of The Golf Club' is that it directly affects the 'Length Of A Round Of Golf' since so much time is spent out of bounds in the search-party mode! Although my tongue may be slightly in my cheek, my sober intention is that people with these ultra-long drivers should be watched carefully over the course of the round and be made to keep the 'Pace Of Play' to the clock so we who follow can enjoy getting a round in between sunrise and sunset!

Slow Play Sucks!

Learn to play 'Ready Golf' right away!

ABOUT THE GOLF BALL

I am not going to get into the construction of a Golf Ball, but have a few earned words about its performance.

IT IS TOO HOT!

We hear a lot about the 'Distance' the high-speed 'Clubhead Swingers' can make the Ball go away. We see it. We 'FEEL' it. We envy it. We dislike it's quandary!

Great world-class golf courses are being either redesigned and reconstructed accordingly or they can no longer be used as tournament venues because the big hitters make these 'Grand Dammes' look insufficient unless the greens are an upside-down tea saucers and a stimp of about 30! Their loins must be at least three inches in the second cut, 5 in the third and unplayable in the rough! What has and is this game deteriorating to? These old treasures must employ greens keepers who are 'Masochistic' to say the least! What a shame!

We have a club controversy that seems to be moderating due to the courage of a few who have adequate vision to define parameters. The ball, very big business that thrives on modern physical magic and miracles, true or not (you know a titanium core and 'Zipidy-Do' cover that launches you just beside the Challenger with as much secrecy as Colonel Sander's secret recipe), still poses a great and growing threat to the Game.

We hear about the proposal of two different standards of equipment, one for the hacker and weekender and yet another for the professionals and players. Rubbish! Wonderful 'PRIDE' says, "I am not going to play anything different than my adversaries to beat them." Handicap tends to my support needs and does so with proven flair and reliability.

Let's get the rules dignitaries to give their heads a strong shake. Then to take a strong dose of courage in whatever form it might best take for them.

COOL OFF THE BALL!

Make one standard 'Golf Ball' that struck by 'Long John' will not travel farther than 250 yards or some such length. This will NOT stop the viewers interest or numbers. I think it will enhance it.

Golf, that comes down to simply 'Putting Well' every hole is getting boring! Shot-making needs to be revived. It really is alive and well, but we are not speaking up! How good are #2 Irons to a small green? Do you not enjoy 'Mid Irons' to greens that are not holding overly well? How do you feel about 'Short Irons' that must not be releasing in order to hold those same 'Dance Floors'? Now you are talking! I am not alone in my feelings and I know lots of very strident viewers who just feel that there is something awry in the 'Golf World'. There is!

So what do we do about those who will assuredly find too much challenge from the tips with a 'Cool Ball'? What do you think we have multiple 'Tee Boxes' for? **"Well I am going to play this course from the tips. I am going to get my money's worth!"** We need to be more influential in the pro shop with our guests. We need to explain to them that if they are not players, they must use the 'Blue or White Tees'. If they do not get the message, then it is up to the 'Course Marshals' to politely convince or use more influence to have these nice folks play forward. That is how it must be!

The 'Ball Performance Controversy' has its solution right in our very face! The very few manufacturers will find a way to keep the margins and shareholders appeased! We just need someone at the 'USGA and the R&A' to have the courage to establish and enforce good will and common sense in favour of the 'Game' in the face of tremendous political and financial pressure from the manufacturers to stay out of it!

Now many of us understand the absolute monetary foundation and its manipulation in the drug companies who make billions of dollars on but one major simple drug for a period of 14 to 17 years of patent protection. Influencing the FDA officials is just a small underwritten expected and accepted part of the game. Let us end this dance in our 'Links Midst' in the interest of our 'Great Game'.

Oh yes! And we need to build a lot more 'Muni or Executive Courses' that are well under 5000 yards, fairways sloping towards the middle, with fewer unavoidable hazards so people can get out and play three hour rounds for a twenty dollar bill and make lower scores for bragging rights. That's value!

The absolute objective of this 'Great Game' is 'PLEASURE'! I just want to add that 'Golf Is Enormously Popular' and the interest is spreading. Television ratings are rising! Isn't that great? But, did you know that the 'Gross Annual Number Of Participants' (the number of golfer world wide) is '**NOT GROWING**'!

We are losing as many as we are gaining! More people watching while sitting on their fat butts and not getting up onto their feet and participating! Good for the advertisers but not so good for the general public. Good 'Shareholders Bottom Lines' but more big bottoms sitting in a line as well!

So why do you think this is a reality?

I can hazard a guess!

LET ME TRY:

1)It is NOT so much the cost or playing a round as you can find affordable golf growing everywhere. At approximately \$20.00 per round you should be able to afford to play. If not find a way! You can 'Putt and Chip' free at almost all public practice areas. Start by doing more of that which needs more attention in any case!

2)It is NOT the cost of equipment as affordable used sticks abound. But we professionals and those of us in the know need to get that message out there too in order to counteract the manufacturer's promotional activity with its 'Sticker Shock'.

3)It is the 'Frustration Quotient' which can be reduced by taking but a few good lessons. Making a good 'Golf Swing' is not magic. Well it is 'Magic' but not all that common unless you earn the right to make that quality of 'Motion'. Seek a little help!

4)It is the 'Length of the Courses', especially knowing that the longer and more difficult they become to suit the 'Hot Balls and Prodigious Distances', the more people are turned off. How many average folks can afford 'Five Hour Rounds'? Not many! As the number of rounds per year fall off, for any reason, the cost of each 'Green Fee' must increase as the cost of maintenance does not decrease but very small amount with reduced traffic. The graphical curve becomes negative! People quit playing.

5)It is the 'Hazards On Course' that must not be in the way of the

average folks but rarely. Designers must put them where they can be seen by all, but hit by few. And that few had better be the players or better ball strikers! OB is included! Fairways need to be big and wide so the stray Balls are generally still 'In Play'. 'Lost Balls' incur both time penalty and cost penalty. That is an average man's fear while heading to the links! Do I have enough balls and can I keep buying more?

So what about the players who need the challenge? During tournament play the greens keepers have a handle on things. They let the 'Rough Grow' and 'Narrow Up the Cuts'! The 'Short Stuff' gets in short supply! The difficulty increases very easily and at virtually no additional daily cost or fixed cost. That is easy!

Also those venerable 'Grass Keepers' can cut the 'Dance Floor' tighter and reduce the water. Fast and faster will get to you! Pin placements can be and are masochistic in the later rounds of the tournament!

So do you see that shorter courses can be made to be very challenging? The premium on 'Shot Making' can be reactivated. We can be forced to develop much improved 'Short Games'. Then the 'Game' might not be all 'Putting' which it seems to have become! I find that truly boring and counterproductive to the best interest of the 'Game'.

So you see that we all need to keep the 'Average Golfer' much more in view of operations. We need to focus on them. If we continue to fail to do so, the numbers will remain stagnant or even fall off! The business people in this 'Great Industry' had better get thinking more about this as all our 'Golf Futures' depend on some applied 'Wisdom and Common Sense'!

Tell them this!

Speak up!

TOOLS COMMON SENSE

I have had lots of very nice folks ask me to give them a five minute dissertation on 'Golf Club Selection', their construction and use. I cannot but I can get close or at least started! The rest comes from these and other books.

There is one series of 'Usage Points' I make that is of interest.

It is easier to strike the 'Little White Ball' when you are 'CLOSER TO IT' and when your 'SWING IS MORE UPRIGHT OR VERTICAL'. The nearer your Hands are to the Clubhead, the more 'Control and Accuracy' you are going to manage. The farther they are from the Clubhead the less 'LOFT' your 'Golfing Tool' will have except for your 'Short Stick'. Longer-shafted clubs tend to produce more 'Side Spin Rate' about the 'X Axis' and thus more curvature in 'Ball Flight'. 'Putting' accurately to the 'Ten Foot Circle' is easier than 'Driving or making #2 Iron Shots' to the same target!

The long-shafted clubs, like your Driver and #2 Iron, have a more upright face and flatter 'PLANE' which imparts 'Gear Effect Ball Action' that is more problematical. The Clubhead is far from your 'Hands and Sternal Hub or Swing Centre'. That too makes getting the very 'Butt Of The Ball' and the 'Thin Dime Sweet Spot' together at high speed a testy undertaking.

The 'Pendular Vertical Clubhead PATH' stays 'On LINE, On PATH and On PLANE' longer quite naturally. The 'Flatter Swing Plane' makes the 'Square-ness Interval', 'IMPACT and RELEASE Zone', very much shorter and thus the 'TIMING ASPECT' much more challenging. If you are truly a 'Square to Square to Square' 'Putter' with a good 'GRIP', you are always 'On AIM, On PATH and On PLANE'. All you need to do is set your 'ALIGNMENT', take one look out and back and 'EXECUTE'. Wonderful stuff!

Play with your shorter clubs and master them first.

Remember, a 450 yard PAR 3 can be made with three solid strikes by a 150 yard #8 Iron! Then you still have one more stroke with the 'Upright Stick' to hole out if you miss sticking your 'Approach Shot In The Jar'!

Intellectual Course Management! Strategy!

LENGTH, LOFT, LIE SIMPLICITY

I have used these terms for years both as a 'Certified Master Club Builder' and as a 'CIMTP'. Interestingly, the majority of golfers on a global perspective or cross-section, do not have but a minimal understanding of these terms. When you consider 'Players', they know the terms but their 'Physical Mechanical' definitions may be slightly deficient. But, remember, they are 'Ball Strikers' and not generally technicians.

So, although the cart may be slightly ahead of the horse, as the saying goes, because the actual subject matter sections are in the next chapter called 'TOOLS', I still would like to take this opportunity to give you my simplest explanation of these three fundamental 'Golf Equipment Terms'.

The three words are '**LENGTH, LOFT and LIE**'. They might be synonymous with '**Shaft, Clubface and Sole of Clubhead**'.

Firstly, take a look at the following illustration. Look at the picture before the explanation. A good place to start!



Length, Loft & Lie Characteristics
Linear Axes

Notice I have called these three aspects 'AXES'. They are precisely that, straight lines in relationship to other straight lines in space!

Let us begin with the '**LENGTH or Shaft**'. It is a primary 'Axis' and may be appropriately called the 'Vertical Axis'. It relates to 'Mother Earth' and creates what is popularly, or unpopularly, known as 'Swing Plane or Shaft Plane'. If you 'Swing On Plane', the term may be popular!

At the base of the 'Shaft' is the 'Clubhead' which has a 'Base Or Sole' at the bottom of the 'Clubhead' that makes contact with the ground. Although most of the 'Soles' are 'Cambered or Curved', for this discussion, look at it as a flat surface or 'Straight Line'. If the '**LIE or Sole Of The Clubhead**' were at 90 degrees or perpendicular to the 'Shaft Axis', the 'LIE ANGLE' would be 90 degrees. Your common 'Wedge System Lie Angle' ranges from 64 to 67 degrees 'Toe Down from Horizontal or 90 degrees' to the 'Shaft Line'. In other words this measurement is to the 'Shaft Line or Axis' dialled or indicated from below the 'Sole Line' or beyond the hozel and not measured to the 'Shaft' above the 'Clubhead'.

Average or 'Industry Standard LIE Angles' might be as follows: #SW(65), #PW(64), #9 Iron(64), #7 Iron(62), #5 Iron(60), #3 Iron(58) and your #1 Iron(56). You fill in the even numbered club blanks. This means that the 'Long Irons' are more 'Toed Down' than are the 'Short Irons'.

Enough data. The topic herein is 'LENGTH, LOFT and LIE' and not 'Clubhead Specification'. (more soon on 'Specs')

As you can now see from the illustration, 'LIE ANGLE' is in relationship to 'Perpendicular To The Shaft or Vertical Axis'. It is the 'Nominal 'L' Shape'.

Now to the '**LOFT or Clubface**' aspect. This 'Clubface Axis' is related to the 'LIE AXIS'. If 'LOFT' were 90 degrees, the 'Clubface' would be horizontal to the ground or level to the 'LIE AXIS'. If the 'Clubface' were parallel to the 'Shaft or Vertical Axis' the 'Clubface Loft' would be '0' degrees. Your 'Standard Sand Wedge Loft' is about 56 degrees so the 'Clubface LOFT or Axis' is 56 degrees down from the shaft or vertical. A 'Putter's LOFT' varies from 0 to about 4 degrees.

Other 'Clubhead Lofts' are nominally as follows: #A Wedge(52), #P Wedge(48), #9 Iron(44), #7 Iron(36), #5 Iron(28), #3 Iron(20) etc. There are slight variations across the industry or from individual to individual in these 'Balanced or Bracketed Lofts' but you get the picture.

So, the key point here is the 'Axis or Linear Relationship' of 'LENGTH or Shaft To LIE or Sole' and then of 'LOFT or Clubface Angle' to 'Lie Angle'.

Simple enough?

Q12) 'TRUST YOUR CLUBS' and 'TRUST YOUR SWING'.

**Whisper my favourite words:
"I'LL BUY IT FOR YOU."**

Ms. Beverly Hills

TOOLS

1) TRUST YOUR CLUBS:

Properly fitted golf clubs are the ONLY part of an improved game one can actually buy simply for cold cash without but sufficient effort to get your mind and body to a trained club fitter and builder. The clubs are highly '**Objective**' while your swing is unfortunately highly '**Subjective**' and improvement here must be '**Earned The Old Fashioned Way**' by intelligent dedicated smart practice and practising smart to prove what is being developed and soon adopted will stand the test of pressure on the course while defending ones pride and reputation.

Strangely as it may seem, the novice high-handicap player along with the older golfer whose swing will certainly have changed insidiously over the years, are more in need of the advantage of properly fitted tools than might be the grinding competing professional who can generally get the best money does not have to buy! The professional swing can handle minor equipment shortcomings and readily adjust.

The general public thinks it is the other way around. I think that is why they so readily accept the sales pitches of all too commonly untrained commissioned credit card chasers. Don't get caught on this merry-go-round as getting off is fraught with stumbles and skinned knees.

2) THE GOLF CLUB IS FAR SIMPLER THAN MADE TO APPEAR !

The media, including television, radio and magazines, all make the new generation golf clubs, with their latest little technological twists, seem to be the answer to all our 'Woes' and 'Wildest Dreams'. After all, this million dollar a year touring pro is using it, I will share in his magic!

If all the sponsorship money were withdrawn for one year, it would prove most interesting to investigate what equipment was still being used to earn a living and win on the tour grind !

Touring pros golf five to six days a week and spend as much as six to eight hours a day on the range working on their games or playing. Be realistic in your outlook and maintain perspective. It would be nice to think buying a certain club would make us like the 'Image Owner' but life isn't like that. We have to be born with some God-given talent and then earn a great swing. I would like to add that a great many of the big names who are 'supposed to be playing' a certain club or brand name are NOT. Wearing a shirt, cap or carrying a well-marked bag does not mean that the golfer likes or plays the brand. For a modest \$250,000.00 per year fee you might do the same.

It is worthy of note that, if the tool or tools do not work, no long-term successful pro would sacrifice his career for a one year contract to use a bad club and they, of course, would not dare go public to tell you that as it would erode our public confidence in advertising truth and the promotional system as well as certainly violate strict contracts.

The cost of this '**HYPE**' is enormous and every consumer shoulders a share of the burden. Whether this evolution of space-age equipment is meaningful or not remains to be tested and proven. I am sorry to be the bearer of less-than-glad-tidings, but over the years, the touted miracle discoveries, after half a season's dust has settled, generally come back to being more a function of the 'Swinger' than his newly discovered and revealed magic wand. I still carry a 1960's MacGregor 'Nicklaus Signature Persimmon Wood' that has been reshafted to an 'firm' flex taper-tipped Dynamic Gold with a custom grip and 'D 5.5 Swing Weight'. This tool still strikes the ball about as well as any club I have ever carried. I trust it when the heat is on and it is not for sale or loan!

3) **SOME WARNINGS ABOUT SUPPLIERS:**

Remember, not unlike the clothing industry, there are the two times of the year that manufacturers reveal little leaks and orchestrate big splashes about new products. Pant legs get 'stove-piped', 'bell-bottomed', cuffed and cuffless, pleated, unpleeted, vary in colour and material, add and take-away pockets, etc. You know the routine. Designers, for the makers, must make these changes annually or their pressured sales will suffer. If they do not keep up with the market trends, (which are always toward more revenue and shareholders' profits) they will fall by the wayside and lose market share. In this global market, you are either growing or

dying. The process is very fast and the peaks and valleys are steep indeed. GOLF products are no different.

Aluminium shafts which became a one or two year rush were not at all new. Just investigate the magazines and records dating back to the forties. The inserted mallet putters (soft touch) have been around for a very long time. Step-less shafts, so promoted as 'science-in-action', have just been resurrected not created. When those aluminium shafts, mentioned a moment ago, were first formed, they were 'step-less'.

Boron used to be the thing in graphite shafting. Titanium seems to be the 'word' of the moment. Now we have titanium balls no less. There is an old saying; 'Golfers do not get old, they just lose their balls!' May they be titanium or even gold plated. Things come and things go, but a '**GOOD SWING SURVIVES**'.

4) THE U.S.G.A.:

I know my opinion on this 'Golf Equipment Innovation and Evolution' is quite blunt, but that is the way I approach life and the special part of life that GOLF offers all of us. If we are not blunt, someone assisting us may be practical.

So that you know I am in fairly good company, I should like to quote Mr. Frank Thomas, twenty-three (23) years the 'Technical Director' of the U.S.G.A. which is, as we all know, the absolute authority and standard setting body, on this side of the world, for all Golf tools and properties that directly affect the striking of the Ball as well as the Ball itself.

In a recent interview (G.S.O. Magazine, October 1997) Mr. Thomas stated, pertaining to the golf club heads as they are evolving, that he was of the strong well-founded opinion "that a bigger clubhead or a change in metal is not going to do anything for you. It is more '**HYPE**' than it is anything else."

Concerning the trend toward 'Shaped Shafts' he went on to say that "Ninety-nine percent is marketing '**HYPE**'. I can't believe there's any particular advantage in having a bubble, two bubbles, three bubbles in your shaft, or a hump."

There is, of course, the claim that the bulge or bubble 'moves weight down the shaft toward the head where it is more useful and belongs'. This may appear to be so 'optically' but when one takes a fine-bladed scroll-saw and cuts the bubble in half along it's longitudinal axis (down the middle of the shaft) and finds it is both hollow and of the same wall thickness in as below and above the bulge or bubble, one might reasonably wonder where this weight really is. If it is warm outside, the air inside this innovative design might all be hot as well. Smoke and mirrors is common in the industry, but it certainly has sold marvellously well and generated millions of dollars for shareholders.

I want to clearly state that if these innovations merely work in ones mind and thus enhance performance from a purely mental or psychological perspective, they may very well be worthwhile, but so often this type of worth is fleeting. It falls under the category of the '45 Day Love Affair' and will not make a certain surviving marriage.

Mr. Thomas went on to say that he felt a 350 cc head would NOT perform any better than one that was 325 cc's or even 275 cc's. He made it known that he felt there were points of "diminishing returns" with equipment evolution. "Big is in, but that's going to slow. The most efficient use of Titanium, if manufacturers are going to continue to work with it, is to have a 'SMALLER' head and make it more solid than is presently out there."

I strongly agree. Solid mass delivers a solid blow.

The 'Sweet Spot' in both metal woods and iron heads is a very finite pin-point sized location in the Clubhead 'Centre Of Mass' which is never on the surface of the Clubface. It is internal to the head. There is an area on the face that performs best at transferring Energy and Inertial or Active Power (Clubhead Velocity at IMPACT) and it may well be slightly more accommodating in bigger heads. This 'IMPACT AREA' is more easily struck in oversize, perimeter-weighted, cavity-backed iron heads than in the traditional blades because it is bigger, but one must still apply the speeding Clubhead properly to the backside of the Ball. If, during IMPACT, your Clubface is pointing in the bush, the size of the head is not going to correct the impending doom, so called gear effect of not.

What best transfers energy is a very dense object that concentrates the inertia in a small area. It is for this reason that I feel that

there has never been a better golf head with which one might strike a ball very soundly than say, for example the Taylor Made 'Pittsburgh Persimmon' or the original 'Burner' along with clubs like the Callaway S2H2's or others in that slightly over standard cube class. As well these heads did not suffer from the problematical failures and warranty claims that the more recent innovations have been experiencing. When the cubic displacement is increased and the weight is not, something has to yield even if the head is of some magic titanium recipe.

I have always wondered how much titanium was really in one of those 'Titanium Golf Ball' and where it is kept?

Concerning heads, woods or irons, bigger is definitely NOT always better. We shall see a return to smaller heads, shorter shafts and lower prices in the near future and the name-brand leaders today will either be the scouts or front line force in that next profit-generating campaign as well.

5) **PRACTICAL FOLK:**

I have very good students and clients.

For quite some time I have fallen into a habit of telling customers that 'The Shaft Is Everything In A Golf Club'.

I stopped saying that one day as I was certain one of these special people would, unannounced, confront me on the first tee-box with ONLY a basic steel shaft (no head and no grip), seize my bag full of 'friends' and then say to me, "There Mr. Fischer, have a pleasant round"! The Shaft is NOT everything, but almost.

The Shaft Is The 'ENGINE' Of The Golf Club.

Golfers are generally very practical and realistic folks. You have to be when you only need to count to six, look straight-ahead from a little hard, dimpled white ball directly (hopefully) to a clearly-displayed, brightly-coloured flag placed on top of a five foot piece of rebar that sticks right in the middle of a 4.25" old coffee mug that has been set just below the surface of a piece of carefully manicured turf and comfortably strike the ball there quite precisely.

GOLF is a lot of black and white but even the shades of grey are quite predictable. You get into the hole acceptably or you don't. You win or you lose. The time had by you was enjoyable or it wasn't. You do this thing called GOLF often, less often, infrequently or decide to cease this 'Life-long Leisure Skill' altogether, but we know where we stand in the game. It is almost as simple as the story of the turf rollers laying cultured sod on a new course. Keeping it simple, the foreman was heard repeating to the crew "Green Side Up".

However, the Spring market hype takes its toll. "If my last years model only cost \$375, this \$650 version with the new shaft and titanium head, promising an extra 50 yards must be the ticket!"

Our custom-building stores are full of last years and even this years retired tools. Sometimes the honeymoon is very short-lived indeed. If one could only 'Buy a Swing'. Now that would show up on the shareholders' bottom line and the only thing that would be bigger would be the waiting list!



SNAP ON TOOLS ... A RATCHET SET
Stangely Golf Human

6) **SNAP-ON TOOLS:**

a very productive mental image

Really, what is your golf club?

It's a basic tool or a practical weapon
for playing a game that is occasionally a real battle.

Most simply it is an 'EXTENSION' of your own Arms and Hands!

Why do we not play golf, hit golf balls strictly with our hands such as in Hand-Ball? The answer is very simple; '**IT HURTS A LOT!**' **...AND THE BALL DOES NOT GO VERY FAR!**' Besides, my mother told me not to wear out the knees in my slacks as she was sternly no longer prepared to mend them as I had now turned twenty-seven.

If we wanted to be the most accurate we could be, we would likely play golf on our knees hitting the ball with our hands, but with some basic discipline, we can put a hand extension tool in place and deliver accurate, powerful blows to the ball and make the links experience very worthwhile and much easier than doing so from our knees. I have heard of people on their knees during a round. That may be our only salvation at times!

With the '**SNAP-ON TOOL**' concept in mind, place the golf club grip properly in your Swing Arm Hand, look at the #5 Iron clubface and then look up the shaft to the back of your Target Hand. You will see a distinct similarity in the surface of or line of the bones (carpals) in the back of your Target or Swing Hand and the face of the Clubhead. They are similarly parallel or aimed. In other words, your Clubface is an 'Extension' of the back of your own Swing or Target Hand. Think of it this way always. It will help you create the proper '**AIMED FULL HAND MOTION**' during the swing.

This does NOT mean your GRIP automatically becomes 'Stronger' as your Clubface becomes more lofted. In other words, your Target Hand is not necessarily 'Showing More Knuckles' with a #PW than with a #7 Iron or with a #5 or #3 Iron. This Clubhead is simply showing more face to the heavens. This is a generalization.

7) **STILL IN THE TOOL BOX:**

Allow me to further explore this '**SNAP-ON TOOL**' concept for another moment. I have used this mechanical analogy with great success more than not and it is important for me to share it with you. If you are not aware of the Snap-On line of mechanical tools, or this type of tools in general, please take a trip to your local truck shop and ask one of the mechanics, preferably a golfer, to read this section and then to explain what I have 'Up My Sleeve For You'. Everyone has a friend close by with a box full of tools!

The subject equipment is the ordinary '**SOCKET SET**' with all the attachments and gadgets. If you are the owner of one of these mechanical wonders, you might perhaps want to go fetch it so that you can actually apply the real thing to this approach.

Open the tool box and take out the '**3/8" Drive RATCHET**'. Next take out the '**8" Extension**' and the '**12" Extension**' if you have both. Now ensure that the tray full of the '**3/8" Drive SOCKETS**' is handy. When a mechanic speaks of 3/8" Drive he means that the common square hole in every socket, the one that fits onto either the Ratchet or the Extension, is 3/8" across while the hole in the opposite side is multiple-sided and varies so as to fit all the different sizes of nuts.

Take the 3/8" Ratchet in hand. This primary tool turns and controls all the Extensions and actual Sockets. Regardless of the size of the Socket, you turn it with this one common tools. If you 'Knit Pick' me, I would have to admit that there are 1/2" and 5/8" drive varieties as well. If your set happens to be any one of these, all is well and good.

The 3/8" Ratchet can turn both to the left and the right, depending on which way you have the ratchet control button or lever pointing. It's very versatile. I picture this '**RATCHET**' as the golfer's Target Shoulder and Arm right down to his or her Hand. It is precisely the same tool for every shot, especially in the Full Swing mode. One tool fits all!

The 3/8" drive '**8" Extension**' serves somewhat the same purpose and function as the Golf Club Shaft in your 'Short Irons', while the '**12" Extension**' serves as the shaft in your 'Long Irons and Woods'. The device simply allows you to reach farther from your 'Ratchet Handle' or Target Shoulder Socket, but does basically the same job.

The 3/8" drive set of '**SOCKETS**' can be interchanged to meet the needs of your task. If you are turning a 5/8" nut, on or off, right handed or left handed, you will simply pop on this appropriate socket and adjust the Ratchet to be engaged right or left. This is very much like the golf club.

We use but one 'Ratchet or Target Arm' to execute all our swings, short or long. We vary the length of the 'Extension or Shaft' to meet our Clubhead Speed needs. Finally, when we need more or less loft or Ball Flight (Trajectory), we vary the 'Clubhead' just as we might interchange the full range or set of 'Sockets' to adapt to the size of nut we are working.

I am particularly concerned that you realize that the '**RATCHET**' is a common primary Tool. Our Target Arm or Lever Assembly is a common primary Tool in our Upper Body Golf Machine. It swings every club in our bag and even those we may not have bought as yet. Give us time! Right? I'm buying as fast as I can afford!

I know there are slight variations in swing profiles, tilt, inclined planes and even mechanics, but if we were to swing every golf club in our bag the very same way from our Shoulder Sockets to our Target Hand, in big or small, in Full or Less-Than-Full Swings, the results would be commendable. As I have mentioned before and will again, the last Clubhead Path foot of our driver, of our long irons, of our short irons and of our putter are all virtually identical, from our 'Toe-Nails To Our Finger-Nails'.

We know that our clubs get longer as the numbers get smaller and the faces less-lofted. We know that our driver is longer than our III and V woods. But it is entirely possible that we could have all our clubs exactly the same length. In this case, my '**SNAP-ON TOOL ANALOGY**' becomes very valid. We would swing a common 'Ratchet and Extension' and only vary the 'Socket Or Clubhead' to suit our needs and accomplish our specific needs.

The reason that our clubs are varied in length is a topic for another discussion. In Golf there are reasons for everything, even fades, draws and dead straight, picking good or poor partners, being up-beat or defeatist, losing and winning.

I know this analogy is a bit different, but so am I, as are you! And that is wonderful.

8) **OH, BY THE WAY:**

There are no 'Joints' in the 'Ratchet', no 'Wrists or Elbows', to make it unstable, and it is not unstable. But there is a 'Wrist and an Elbow' in our Target Side Lever Assembly Ratchet, which can and often do make it unstable. Work diligently to have your Clubhead travelling through the IMPACT Zone with '**Firm Joints**'.

That is NOT to say '**Stiff, Tight or Locked Joints**' before, during or after the strike. You need to have your primary joints FEELING '**OILY**' throughout the swinging motion, but '**FIRM**' and under control right through the 'IMPACT & SEPARATION Zone'.

Amazingly, if you generally let 'Swinging The Clubhead' smoothly with some 'Whipping Action Through IMPACT', with the objective of creating 'Maximum Clubhead Speed' about 12" to 15" past the Ball, you will prevent or avoid the '**TIGHT ELBOW WOES**'.

Oh, are they 'Woeful'. This is no time to get depressed! Enough said for now on this subject.

9) **SIMPLICITY IN MOTION:**

As a privileged teacher, I occasionally receive a student deeply despondent in his or her Golf plight. The first task I have, whether this soul is physically handicapped or just handicapped by a bad attitude, is to shake him or her out of it. "This game is Fun, Rewarding and very Possible". I, as a teacher, hate being morose or 'Down-In-The-Dumps' for any reason. My love of GOLF and pure determined pleasure in teaching, does not allow moaning.

Perhaps one might think and feel the clubhead to be just ones hand farther away than usual! Backhand the ball with your Swing Hand, which Controls the overall Clubhead, and work or Control the Toe with the fingers of that Brace or Hitting Hand.

Never lose sight of the task of 'Putting It In The Hole In the Least Number of Strokes Possible', and '**HAVING FUN**' while doing it.

NEVER LOOK BACK and NEVER GIVE UP.
You can do it!

Think positive. We at the 'I.G.A. 555 Academy' do not allow negative thoughts and attitudes in our school, clinics, lessons or on the course.

Q13)

'A professional will tell you the amount of flex you need in the shaft of your club. The more the flex the more strength you will need to break it over your knee!'

10) **YOUR EQUIPMENT 'MUST FIT YOU' !:**

Fitted Clubs offer a distinct advantage. TRUST YOUR CLUBS so you can and MUST TRUST YOU SWING. There is nothing left in the equation about which to speculate. It's complete.

Clubs that are right do not allow excuses based on equipment, unless you classify your mind and body as 'Equipment'.

For me, as a professional Club-Builder and player, there is real comfort in knowing my clubs are in a '**Balanced Envelope or Bracketed**' for my swing and '**Torque Range or Flex - Reflex**' adjusted for the amount of power I am going to optimally or otherwise apply.

I can pull any one of my clubs and know there is a potential miracle somewhere in the tool !

11) This EQUIPMENT:

There are ONLY three (3) parts to a GOLF CLUB:

- A) the G R I P
- B) the S H A F T and
- C) the H E A D.

Pretty complex, right? Remember that hammer, with a cushioned grip, also has three part and we know how complex they are!

Insight: Hammers pound nails generally DOWN vertically into the 'Destination Wood'. Golf Clubs simply pound or drive golf balls sideways or horizontally with a 'Flat-FEELING Motion' to their 'Destination Target'.

Darn, I can do this GOLF THING !

Of these three parts above, the SHAFT is by far the most important component. It does almost all the work. The Shaft delivers the power through its proper action via the Head. The Shaft is the Golf Club's engine. Make sure a trained and qualified professional builder 'tunes' your vehicle for optimum performance. The right 'Fit' is seldom an accident.

A) THE G R I P:

I think there are at least 37,267 makes and models or varieties of grips on the market ! Our shops utilize and inventory a healthy number of the available choices and we do not have room to stack the dispensers. If we find an innovative and popular model that either we think merits stocking, or you do, we will very soon get it.

A grip must FIT YOUR SWING HAND. It must not be too small in diameter or you will get 'Compression or Crowding' of your longest digit and finger-nail into the pad of your thumb. Equally your grip must not be too large or you will not be able to effectively hold

the grip in balance between your fingers and your palm. Proper grips make a big difference.

One aspect of adjusting Grip Size that our technicians have found over the years is that larger grips tend to slow down hand action. If you are too '**HANDSY**' a larger grip may help. We may use this to our 'Fitting' advantage if we find a player who is suffering from the 'Hooks', although it is not my first line of defence. If you are '**SLOW HANDED**' a smaller diameter grip may be beneficial.

'**PROGRESSIVE WRAPPING**' is a feature introduced to me some twenty five years ago by a sage golfer and teacher who could build clubs.

We know that our longer clubs should be less '**HANDSY**' than wedges and short tools.

When we enlarge the grip, your fingers open more from your palm. The farther your fingers move away from your palm, the more muscular action is activated up through the hands and wrists into the forearm.

By a specific formula we use, driver and #1 iron grips are 'Wrapped' dimensionally bigger and get progressively getting smaller as the clubs shorten.

HANDS CONTROL:

Your hands via the grip are the ONLY direct contact to the Clubhead. They say to you "It's through me that you come to the object ball to perform feats of greatness".

Make sure your clubs are totally correct for you and do not put it off for another ten years! Don't think that automatically the expensive 'Name Brand' will do the job. Name brand clubs are simply assembly-line products and the factory does not know your name or anything about your needs at the assembly line point in time. You can take your golf clubs to any shop really understanding the physics of fitting and club-making and having the proper testing equipment for a thorough analysis. Remember, that is ONLY half of the equation.

$$X \text{ (clubs)} + Y \text{ (YOU)} = Z \text{ (your game)}$$

Make sure the professional can not only assess your clubs but must also be able to understand your swing to make the two parameters FIT so you can 'Trust Your Clubs and Trust Your Swing'

Let's talk more about '**TOO BIG** and **TOO SMALL**' for a moment.

If you take a full-length standard pencil in your Swing Hand, or Hitting Hand, whichever you prefer as the discovery will generally be the same, it will sit or cradle in your fingers, on the second knuckles. This is what I call a 'Fingery Grip' and you can feel it. Take this pencil and pretend to make large 'figure eights' on the wall using your full-length arm. You will feel that the action created is quite sensitive, fingery and a little less than muscularly in control. It's a bit delicate for taking control of a golf club.

For your own interest, take the pencil in your other hand and perform the same figure eights. Feel it. The muscles in play are fingers and the palm of your hand. Remember that each of your hands does a different job while working intimately together. (Isolate the Parts)

Now take a good sized felt marker (about 3/4" in diameter) and do the same exercise with both hands separately. You will feel the muscular or mechanical action moving up your hand, more toward the wrist. You will feel more stable and having more control of this golf club through its grip.

Now take a large tube of tooth paste (about 1 1/2" in diameter) and do the same exercises with both hands separately. You will feel the muscular or mechanical action has transitioned beyond or above your wrist up into your forearm. You will feel more stable and the grip will definitely have more power and control.

A very large segment of the golfers who simply bought equipment 'Off-the-Shelf' will own grips that DO NOT FIT. Grips that do not fit DO NOT PERFORM as well as ones that are properly fitted. Every little bit of advantage helps, especially when we are attempting to stick a 1.60" ball in a 4.25" cup at 186 yards with a stick !consistently !

Until someone informs you that grips should be 'Fitted' and you actually feel the difference, you do not know. Make sure your grips are properly fitted by someone who 'knows' the criteria and how to apply it. Ask this builder smart question and if his answers sound soft, keep looking. Don't be fooled. It's your GOLF game and pleasure at stake!

B) THE SHAFT:

This is the only 'ACTIVE or DYNAMIC' component of the three part that make up your clubs.

The SHAFT is the ONLY component of the complete golf club that actually '**CHANGES SHAPE**' during the Swinging Motion and IMPACT. The '**SHAFT IS EVERYTHING**' in a golf club! Almost.

The SHAFT '**DELIVERS THE FEEL**' of the Clubhead to your Hands and equally in return for the favour '**DELIVERS THE BLOW**' created by your Live Hands through itself and via the Head to the '**Butt of the Little White Ball**'. The slightest difference in this '**FEEL**' can alter a golfer's '**TIMING**', '**TEMPO**', '**RHYTHM**', '**CADENCE**', '**SWING ARC**', '**T.O.B.**' and a lot more, including the ultimate '**DISTANCE**', '**DIRECTION**', '**TRAJECTORY**', '**SPIN RATES**' and the very '**BALL FLIGHT**' itself. No Small Responsibility for a stick!

Remember the driveshaft in your automobile is entirely responsible for transmitting all the power coming from the engine through the transmission to the rear differential, down the axles and ultimately applying it where the rubber meets the pavement.

The shaft must '**REACT**' specifically to your physical instructions and energy delivery or input. It must carry the clubhead accurately at the shaft's small end, on plane in an accurate Clubhead Path as instructed by the hands of the swinger. The shaft must '**Load and Unload**' in an efficient timely manner so as to deliver your '**Personal Power**' to the butt of the Ball squarely and straight where it is aimed.

A golf shaft must have the correct properties and capability, called '**RESISTANCE**' to bending (**FLEX**) and twisting (**TORQUE**) moments that you create in it. It must come back to **SQUARE** when you are entering the release / hit segments (#2 & #3) of your swing. In

other words, it must not be too STIFF (resistive) or too SOFT so as to miss getting back to the ball precisely timed and cooperative with the owner or master.

A balanced, fitted golf shaft will kick during the IMPACT and Release stages of your swing. You will and must feel this physically real action.

If it is too STIFF, it will not kick. You will lose distance and Clubhead Timing, which generally affects accuracy.

If the Shaft is too SOFT for the owner's Torque and Horse-Power input, the head will not be properly in position at and through IMPACT. It will 'LAG' behind those 'Navigator Hands' through IMPACT and you will lose both distance and accuracy.

All parts in our 'Golf Machine', body and tools, must work toward creating the golf club '**SWISH or Singing Sound or Whistle**' through and after 'IMPACT'. Work on this complete acceleration every time you pick up your clubs.

Poor Clubhead Control equates to inconsistency and erratic scores, always higher than desired.

The golf shaft, coming in various materials from plated steel, titanium, aluminium, graphite, fibreglass, a whole array of composites and more, is the 'Absolute Primary Component'. The shaft is almost everything! Simply pulling one out of the factory case and sticking it into a customer's head and doing so without careful and knowledgeable use of precise frequency, symmetry, duration and torque analytical equipment, is not getting the best job done for the owner. His 'Trusting His Clubs' is compromised and you cannot tell him truthfully otherwise. Golfers are equipped with the inherent ability to FEEL truth and accuracy. They learn it every round! If they are not well served by either their club or their builder, they will let it be known. If they are, you will hear the broadcast loud and clear, far and near. There is no better advertising. Earn it and you will deserve it.

The shaft is most important and warrants some time in getting it right. The scientific parameters related to golf shafts are very broad and can be made to be highly complex. Let's see if we can keep it simple.

i) **DEAD WEIGHT:** simple scale weight

ii) **LENGTH:** Your shaft can be too short, too long and correct related to your physical needs and NOT necessarily your desires or impressions as to what might create the most clubhead speed and the greatest distance. Some times the information we get from locker-room chatter, the numerous books and videos is scientifically correct but may not work for your swing and needs.

To make the shaft the correct length, you require being measured. It's a generally simple matter of '**ARM-LENGTH : LEG-LENGTH RATIO**'. It is NOT a matter of being tall or short, although there will be a relationship to these physical realities. If you are very tall, 6' 7" and have long arms, you may still require 'Men's Steel Standard' length. It depends on how you were made!

Additionally, in order to be '**FITTED**', one must be carefully observed in full warmed-up operation with a series of short, to long irons as well as the driver. The very key component of '**FITTING Is Tremendously SUBJECTIVE**' and takes the trained eye of a teacher to clearly identify personal idiosyncrasies in your swing. Unequivocally, the determination of proper 'Flex' or the general characteristics in your shaft is NOT a function of simply Clubhead Speed through the IMPACT zone, or what we call '**TVATI**', ('Terminal Velocity AT Impact'). Yet 'Clubhead Speed' still survives as gospel and the primary '**FLEX**' determinant used in the industry today.

Techniques will and are changing but only after the damage has been done to a great many trusting soles!

iii) **FLEX - REFLEX:** This is the 'BENDING MOMENT' of the body of the shaft. The amount of 'LOAD' you put on your shaft determines what the '**RESISTANCE**' level will be. (This is Resistance to Bending or the tendency to remain or return to the condition of being 'Straight')

If you are an abbreviated swinger with high 'Terminal Velocity at Impact' ('**TVATI**'), you will likely require a relatively stiff or resistive shaft so as to get the head back to Square at Impact. Interestingly, if you are a nice free full swinger with the same '**TVATI**', you can use a softer shaft as the overall '**LOAD**' is less. Just make a short and fast and a long and full swing. You will feel the difference for yourself.

Most people recognize this 'FLEX' criteria by the terms 'Regular' (Medium) and 'Stiff' (Firm). There are actually many more 'Alpha' (word) categories ranging from Ladies or L3, L2, L1 and L to Senior or A Flex, to Regular R1 to R2, progressing to Firm or F and moving to Stiff, Extra-Stiff, 2X and 3X. This is the real story of 'Flex Range' which sounds complicated but for a professional builder it is daily routine and knowledge.

There is a better determination of '**FLEX-REFLEX MOMENT**' than this '**Alpha System**'. It is called '**FREQUENCY MODULATION**' and was refined by Brunswick Golf. It is '**Numeric**'. The basis for their system is that 'stiffer' shafts vibrate at a higher frequency than do 'softer' shafts. Using a 'Frequency Analyzer' we now determine the '**RESISTANCE LEVEL**' in '**Cycles Per Minute**' or '**CPM's**'.

The vibrational range is infinite and progressive. Common ranges are from 2.0 Brunswick to in excess of 8.5 Brunswick. To give you a picture which creates a relationship to the above 'Alpha' system the following Alpha - Numeric table is provided.

12) **FLEX BY THE NUMBERS:**

	ALPHA	Numeric	
(vibrational coefficient)			
Ladies	L4	2.0	Brunswick
	L3	2.5	Br.
	L2	3.0	Br. Range 2.0 to 4.0
	L1	3.5	Br. (called 4.0)
	L	4.0	Br.
Senior	A	4.5	Br. Range 4.0 to 4.5
Soft Regular	R1	5.0	Br. Range 4.5 to 5.0
Firm Regular	R2	5.5	Br. Range 5.0 to 5.5
Firm	F	6.0	Br. Range 5.5 to 6.0

Stiff	S	6.5	Br.	Range 6.0 to 6.5
Xtra Stiff	XS	7.0	Br.	Range 6.5 to 7.0
XX Stiff	XXS	7.5	Br.	Range 7.0 to 7.5
Hercules	H	8.0	Br.	Range 7.5 to 8.0
Not Human	XH	8.5	Br.	Range 8.0 to 8.5
Supernatural	XXH	9.0	Br.	Range 8.5 to 9.0

It is possible to create Flex-Reflex that is even a stiffer or higher 'Frequency Modulation', but I have not met 'Hercules' yet and I personally know individuals who can strike a drive in excess of 350 yards comfortably! They could NOT do so with such stiff or resistive shafts as 9.0 plus. There is no 'Kick Delivery' without which there is less ability to make the Ball 'GO AWAY'

... far.

13) TALENTED TECHNICIANS:

In the '555 GOLF' assembly and repair facility, our technicians judge shafts on four (4) very specific criteria:

- i) **FREQUENCY** (Vibrational Analysis)
- ii) **SYMMETRY** (oscilloscope uniformity of dynamic head path. When the shaft is frequency analyzed, our equipment also analyses the up and down path consistency. It should be stable and perpendicular to the floor)
- iii) **DURATION** which refers to the length of time the frequency is maintained or the frequency degeneration period. Your shaft should have lot of life. it should perform with lots of energy feed-back or delivery for quite a long period of time. If, as in a piano tuning-fork, it were to only vibrate for a few moments, it would have rapid 'Frequency Degeneration' and, thus, there would be little life in the shaft. It would not deliver as much energy or snap to the butt of the ball as we might desire.

So, when an 'I.R.G.O. 555 GOLF' technician evaluates your shafts prior to or after building, one criteria assessed is Duration or the amount of 'Life' the shaft inherently possesses. What it does NOT have, it CANNOT give back to you in performance !

iv) **TORQUE:** This is the ability of the shaft to 'TWIST' around it's X-Axis or the 'Longitudinal Axis'; that is the line down the centre of the hollow middle of the shaft. This 'Torque' takes place 'Clockwise and Counter-Clockwise' during every full swing back and through the Impact Point; where the ball sits waiting defensively for your speeding clubhead to impart it down the line to the Flag, Cup, or Pin.

v) Generally, the stiffer the shaft the less the '**TORQUE MOMENT**' will be. If it is stiffer it will twist less. If it is softer, the clubhead will turn or torque more. Do not misconstrue that Torque is bad. I think the proper amount of twisting action through Impact is beneficial.

Most Torque takes place in the 'A FLEX' portion of the shaft. The 'A FLEX' is the about 8" to 12" at the tip end of the shaft or the smallest diameter end closest to the head. The 'B FLEX' is above this in the body of the shaft.

A market example of 'Torque' used in place of 'Flex' can be found in the Wilson 'Fire Stick' shaft programme. You will be aware of numbers such as 2.0. 2.8, 3.0 and 3.5 placed on the shafts. This causes golfers to refer to their flex as 2.8 when, in fact, this number as explained is a 'Torque' nomenclature or rating and has nothing directly to do with 'Flex', except that lower torque shafts are generally stiffer.

Torque is measured in Foot Pounds (Ft-Lb.) and is physically measured by clamping an arm on the tip which is one foot long and having a one pound weight attached. With this load positioned horizontal to the floor or level, before it is released onto the shaft tip, the shaft is calibrated or measured. A 'Degree Gauge' is set to ZERO and once the weight is released, the new reading, which might be 3.5 degrees means that the torque-created twist was in the amount of 3.5 degrees. If the tip-end of the shaft is 'stiffer', more resistive, the one foot pound load might have only caused it to yield or twist 2.5 degrees.

and

v) **KICK:** This action occurs when the shaft is loaded or bent back during the direction changing portion at the 'Top Of Back Swing' and during the early starting of the forward portion of the swing when the torque is starting to be gently applied. This 'KICK' takes place generally in the 'A FLEX' but is contributed to by the straightening of the entire shaft.

Softer shafts have a lower 'Kick Point' than do stiffer shafts.

A lower 'Kick Moment or Point' generally produces a 'Higher-trajectory' or 'Higher-Flying Ball'. A lower centre-of-gravity clubhead also tends to create a higher-flying ball as the Centre of Mass is lower or below the equator of the ball, thus acting or directing Force 'Upwards' through the ball.

Softer shafts naturally have lower kick points and thus, stiffer shafts are often referred to as having 'Mid , High or Butt Kick Points', simply meaning that the action is 'Higher' in the 'A Flex' of the shaft working toward the 'B FLEX' or 'Belly Section Or Body Of The Shaft'.

14) **ALPHA LOAD - BETA LOAD:**

We're still on the basic topic of the 'Bending Moment' of golf shafts or what we call 'Flex-Reflex'.

When you see 'stop-action' photos of a player in the 'Dynamic Mode' where the swing is under-way, i.e. at the 'Top of Back Swing' (T.O.B.S.), where the head is just starting to change direction, there will often be a significant bend in the shaft, head or tip toward the ground, at this point in the swing sequence. It is what I call 'Segment Zero or the 1-0-0-1 Segment'.

This bending is called the '**ALPHA LOAD**'. The slower or less radical the direction change, the less will be this 'Alpha Load' factor or bending moment at T.O.B.S. It is actually called 'Negative Moment' as the X-Axis of the shaft, that is the line down the centre of the hollow stick, is bending away from the ball or Impact Point. When it is reflexing or kicking toward the ball, straightening, it is 'Positive Moment'.

'**BETA LOAD**' is the same bending of shaft loading moment but simply resulting from force being applied later in the down or forward swing by the swinger's muscular power. As you start to 'Squeeze' or fire the Clubhead through the backside of the ball, Segment #2 or the Acceleration Segment, you apply power and torque through your body and most specifically through your powerful active 'Live Hands'. This load further bends the shaft to a greater 'Negative Moment'. In other words the shaft bends more and the Clubhead gets farther behind your leading hands. Your fire-power creates more 'Clubhead Lag' just before release and Impact where the bent shaft straightens delivering the blow.

If one can visualize ones body as 'COILED' at the 'Top of Back Swing' (T.O.B.S.), with load or some powerful twist in the Brace Foot and Brace Leg or right side, it is this 'UNCOILING' of the big muscles of the body (from the ground or cleats up) and straightening of the cocked 'Three Lever Assembly' Brace Arm or hitting arm which is attached at the Brace Shoulders that creates and transmits Clubhead Speed or force via a dynamic shaft; the 'Engine' of your golf club.

Remember, the '**3 LEVERS**' in the Upper Body Machine are;

- 1) **the Cocked Brace Shoulder**
- 2) **the Cocked Brace Elbow** and
- 3) **the Cocked Brace Wrist**

These three primary upper body 'Brace Side Articulating Joints' should load and unload in one smooth '**ACTION**', hence we have developed in GOLF the explanation of the Brace Side Upper Body Lever Function being '**Three Lever - Single Action**' although the un-Cocking of the loaded Shoulder happens before the un-Cocking of the Elbow and finally the firing of the cocked Wrist, it occurs in one relatively powerful '**SINGLE ACTION**'.

I like to verbally talk my students through their forward swing by telling them (during their actual swing) to 'PUSH' (Brace Foot Action - Leg Drive) and then, when the timing is precisely right to FIRE their Cocked or Loaded Brace Wrist, the third lever in the Brace Side Assembly.

Remember the first move in the Forward Swing is the pure, simple and relaxed '**Gravitational Dropping Down**' of the entire Lever

Assembly right toward the ground to a point where the Hands are falling well below the Brace Armpit towards the Brace Hip, where I like to tell the student "**Now, Squeeze PUSH and FIRE everything but especially the Clubhead T H R O U G H the Ball right Down the Target Line to and through the Target or Pin**".

There is more about the '**Segment #2'** muscular action later in the book, but it will benefit us to say right now that the Clubhead does NOT move positively toward or advancing on the Target until it drops below the GRIP and thus our Live Hands. This being the case, there is little purpose or benefit in our 'Firing Any Muscles' until the Clubface is advancing. This moving forward is quite late in the forward swing.

Stand up with your favourite club and do this in slow motion, FEELING the truth and reality of what I am saying.

**DO NOT FIRE FROM THE TOP (during Segment #1F)
DROP INTO Segment #2F and then PULL the TRIGGER.
Not before .. PERIOD!**

15) **POTENTIAL ENERGY:**

At the T.O.B.S., the 'Potential Energy' is at it's greatest. During the forward swing this 'P/E' is converted to a speeding Clubhead and takes on the 'Kinetic Energy' state or becomes active energy.

Now you're making some HEAT.

It all sounds complicated but it is NOT. I have not even used ONE Physics formula in this entire book...so far! and I could do so ad nauseam! (literally)

Just grasp this 'Swinging and Firing Concept' and forget the mathematics and numbers. A great GOLF swing has no time for thinking mathematics, other than 'ONE Under PAR'.

Remember, in recording GOLF Strokes per hole, we use no numbers over 6! Great idea!

A quick note of interest is that when I 'FIT' a client for a new set of clubs, this 'Bending Moment or Resistance Factor', which is the result of applied torque or power, is one of the very key components one must observe and factor. It is very subjective. The working, dynamic shaft must offer enough 'Resistance' to offset the amount of combined 'Alpha and Beta Load' that is applied by the individual. This 'Person-Tool Balance' enables both the golfer and the Clubhead to 'Get Back to Square' or 'Address Ready' set-up point at relatively the same instant.

Why can a small, 135-140 pounder (soaking wet) ball striker propel a little white ball 275 yards with seemingly little effort?.....The answer is '**FITTED** or **CUSTOM EQUIPMENT**' that is balanced to his or her needs combined with force applied with proper timing. It is every golfer's realistically attainable dream!

C) THE HEAD:

This is a 'Passive or Static' (depending on your Motions) part made of forged soft steel, plated for lasting appearance and protection, of a mixed or blended alloy and of stainless steel or other metal such as titanium. The head is simply the 'Hammer Head'. It is a tool.

There is much too much made of this component by every aggressive and imaginative manufacturers and their marketing cohorts. If their design teams are so knowledgeable and dedicated to improving the performance of us Golfers, you would think they could get it right enough to last at least two seasons. I was once told that 'Going Out Of Style' every Fall generated more revenue for the production and supply companies annually. Do you think that might have some influence in the industry?

The designs appear, at least in the advertising medium, to be endless eons of this highly-complex research. Don't be misled. There is very little new in golf. You were recently told of the new aluminium shafts, of the new non-stepped shafts, of shafts with bulges in their body, and more. Pick up any reputable historical golf catalogue. You will find them all in there. Not unlike cuffed and cuffless pants ... revisited!

17) **IRON HEAD STYLES:**

There are three (3) basic Iron Head styles:

- i) **Traditional blades:** (standard cube)
- ii) **Hybrids:** various profiles somewhere between the blade and the oversized new designs
- iii) **Perimeter-Weighted Cavity Backs:** which move or distribute the clubhead materials farther from the 'Centre Of Mass' creating a larger sweet-spot or 'Centre Of Impact Area' ('OPA').

These come in three (3) sizes:

- i) **Standard Cube,**
- ii) **Oversize or Midsize** and
- iii) **Jumbo**

Generally Oversize and Midsize are two different terms for the same thing used by different manufacturers in the marketing quest to uniquely satisfy shareholders.

I have heard it rumoured that when grown boys begin to fight big financial fights (called patent and copyrighting litigation) over who can use common 'Eminent Domain' words such as 'Oversize', 'Midsize', and the like, this whole stage show will become more expensive for the consumer. Suspicion has it that this process is real and unwell today.

It is worth remembering that Clubheads, both woods and irons, are made to specific progressive dead weight specifications. In other words, the 'Oversize' heads, although they are bigger, do not weigh more or appreciably more. They are '**Gram Weight Specific**' from the foundry. If they were not, we assemblers could not produce or maintain 'Bracketed Swing Weight' consistency. Your clubs would all weight and feel different making consistent performance with them a chore. 'How can I make consistently great shots when each one of my clubs is different?' The answer is with a tremendous memory, knowing each clubs peculiarity, and having the touch of a maestro in a musical ensemble. Not me folks! I prefer the simple consistent model.

Beyond this simple long-term style and shapes, and going with the created variety, there are a million claims on miracles and wonders that are designed by teams of scientists before the stage is set in the factory. I submit to you that our bombardment with hype and specifics is more the result of an active marketing team.

Being a flight engineer, I look at the claims very carefully to prove or disprove them and seldom is there much evidence to support claims. When a very high-tech change evolves, I think the percentage of golfers who might appreciate, use and feel this change is slight indeed. In order to feel small changes you must handle and practise with your equipment using tour or course balls, not range balls, for several hour every day. That eliminates over ninety nine (99%) of North American ball strikers!

i) **BLADES**, where the metal or mass distribution is generally flat on the back and front of the head. This design creates a very small 'Sweet Spot' or 'Centre of Mass' location on which to strike the ball with optimal results. The 'Impact Feel' which is translated from the head up the shaft and through the grip to your hands is very sensitive and 'miss hits' are telling, indeed. Blades are still used by very specific request but their general marketplace has faded over the years and given way to equipment that offers more forgiveness.

ii) **HYBRIDS or MUSCLE-BACKS** in design are somewhere between blades and perimeter-weighted cavity back heads. The hybrid head has some specific weight-distribution design incorporated, such as channelling on the backside which moves weight more to the top and bottom of the head where it is more beneficial to strong hits; such as '**RADIAL SOLE**' mass which places the concentration of weight (Centre of Mass) very low in the head, in the vicinity of the sole or bottom surface of the head.

Some of the hybrid forms began to have bulges or slight indentations on the backside of the heads. These resembled blades and were called '**MUSCLE BACKS**' due to the density thickness or concentration of material directly behind the most desirable IMPACT area or 'Sweet Spot' as it is so often called. It was this specific trend which started to move more material progressively from even distribution on the Clubhead more outward toward the perimeter. Material was moved towards the toe and the heel as well as lower and higher on the Clubhead. This was accomplished in order to compensate for strikes on or toward the toe. Toe strikes create a lot of undesirable 'Torque' or twisting action moving the toe aft

of it's SQUARE Set-Up or Address Fix position.

This deficiency is more prominent with 'weak handed players' causing ball flight right or to the 'Low Energy Side' of Target Line. The open club face always moves the ball in that direction. Clubface AIM determines Ball Flight Direction whether it be straight or curving in nature.

iii) **PERIMETER-WEIGHTED CAVITY BACKS** adopted the real physical advantages of moving the mass toward the outside of the heads by hollowing out the centre. This hollowing-out is called the 'Cavity' and the movement of the mass toward the outside of the head is called 'Perimeter Weighting' which makes clear sense. The Perimeter-Weighted Cavity back heads produce a larger '**CENTRE OF MASS**' ('COM') or '**SWEET SPOT**' and give the manufacturer the ability to place more weight toward the toe of the long irons which increases the toe-mass which counteracts a hit toward this region of the head. In other words, if you strike the ball toward the toe, the increased mass will enable your club face to resist the turning, torquing or twisting action it would usually experience with a blade. More mass or weight toward the toe delivers more energy there which resists twisting.

Generally in '**PROGRESSIVE**' Perimeter-Weighted Cavity Back Clubheads, there is more mass toward the toe in the long irons (#1, #2, #3 etc.) and less in the short irons (#LW, #SW, #AW, #PW, #9 etc.) In fact, this weight shifting from toe to heel is 'Progressive'. It shifts a little in every head until the specific weighting has translated from the toe to the heel.

'**PROGRESSIVE WEIGHTING**' is accomplished in generally two (2) manners;

1) By making the actual perimeter section thicker in the area where the weight is desire to be shifted or concentrated and

2) By placing a weighted area inside the cavity, usually toward the bottom of the hole, and moving this 'Slug Weight' from the toe to the heel as required to create the proper balance.

Of course, knowing the individuality of the manufacturers and their tendency toward marketing exclusivity, their voracious appetites for being different and first, all manner of combinations in

perimeter and slug-weighting have evolved, but to the same overall results.....'Bigger Sweet Spots and Better Balance' which overcomes some of the poor habits and hit we are able to create.

iv) **Oversize, Midsize and Jumbo:**

These three head size terms mean virtually the same thing. they are larger than what had been established as the 'Normal' standard cube or displacement heads.

Why more than one term? The answer lies in yet another question. Why more than one absolutely 'Perfect for You' golf manufacturers with several magic club designs each the ONLY way to go toward perfection? Marketing!

When one big name brand came up with the term '**MIDSIZE**' and soon thereafter decided they owned, by copyright, the words that they had chosen to name this twentieth or twenty-first century zenith in golf technology, the next market grinder was forced to use Roget's Thesaurus to come up with yet another option for saying the same thing while alluding to the public that it was totally new and innovative. Sadly it works and continues to work far better than in the public's best interest.

Is there a limit to this size? YES, and I think we are very close to it if not having already crossed over the line of sanity and practicality. My teaching experience gives me practical experience in knowing the same 'Stretching Of The Cube Envelope' very much applies to Shaft Length.

As mentioned before in this book, the average human-being can only generate so much POWER and ABILITY to control it. The bigger the tool, longer and heavier, the greater the strength, timing, pace, rhythm, cadence and last but not least, the more mental composure required to make it work. Sadly, the message that so permeates the industry is that these new weapons mean add just a bit or a lot more '**KILL**', depending on your mood.

One takes very little time to either learn or 'FEEL' that this approach does not work!

18) **HEAD SPECIFICATIONS**

which professional club makers understand and monitor are:

1) '**DEAD WEIGHT**' is the actual gram or scale weight of each head. These weights are 'Progressive' in nature or the lower numbered heads weigh less the higher numbered ones. The progression is quite specific. We call it 'Dead Weight Specific Bracketing'.

Certainly every similar set of heads, in the same style and model, must have the same Dead Weight in each number. All #5 iron heads must have the same Dead Weight and specifications or we could not assemble 'Consistent Components' producing 'Consistent Sets' which are necessary to obtain optimum results.

We call heads that come carefully 'Dead Weight Matched' as '**BRACKETED GRAM WEIGHT SPECIFIC**'. Such specific consistency is very important for high-quality precise clubs.

BETTER CLUBS HIT BETTER SHOTS.

TRUST YOUR SWING TRUST YOUR CLUBS

If all Clubheads were the same Dead Weight and the shaft each got progressively longer as they do, the Swing Weights (that Head Feel) would get progressively heavier and we would find it difficult to perform uniformly. Your #1, #2 or #3 irons would FEEL like they had a one pound swing weight and, instead of being say **D-2** would FEEL like **E-2**, a little heavy for us mere mortals.

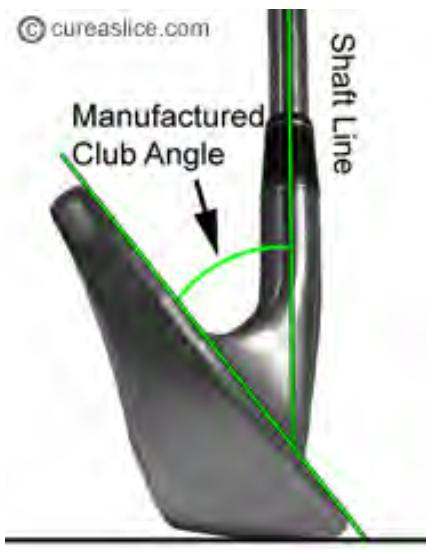
2) '**LOFT**' is the angle of the face of the clubhead as it relates to vertical or plumb. The face of 'Higher Lofted' clubs, #LW, #SW, #AW, #PW etc. point more toward the sky than do 'Lower Lofted' clubs. The ball flight of the more lofted clubs flies higher than does, for example, a #1 or #2 iron.

The Higher numbers, more lofted clubs, convert energy or hits into a lot of height whereas the less lofted club create energy more into distance and roll. We need a variety of tools to do a variety of jobs.

Similar to our comments on 'Dead Weight' our clubs must have carefully manufactured '**LOFT SPLITS**' of about 4 degrees between clubs. When they are so, we call them '**Loft Bracketed**'.

If your lofts are not so, you will find the Distance each club makes the Ball travel from one end of your bag to the other, will not be consistently '**Split or Bracketed**'. Instead of finding your #8 Iron striking the Ball 145 yards and your #9 Iron 135 yards, your '**SPLITS**' may be, for example, 150 and 130 which is simply not close enough. The pros call this having '**A Gap In Their Bag**'. This gap makes them feel like there should be another club, like a #8 1/2 in the sack. No such thing!

LOFT IS A KEY CLUBHEAD CHARACTERISTIC



LOFT ... Neutral

© cureaslice.com



LOFT ... Strong

© cureaslice.com



LOFT ... Weak

Of interest, the higher the Loft of a Clubface, the Lower, the farther below the Ball Equator will the Clubface make contact with the backside of the Ball. This Clubface to Ball, 'Lower-than-Centre or Equator' contact characteristic, causes '**Back or Under Spin**', increasing the height or trajectory, the steepness of 'Launch Angle' and the reduction of Distance, be it 'Air Travel or Ground Roll'. A 'Back-Spinning' Ball will not 'Release and Roll' very far if at all. You have seen it on T.V., if not with your own game, the Lofted Iron Ball making contact with the putting surface and then immediately backing up like a young rabbit who came out its hole looking at a hungry coyote, face-to-face, at ten paces. No time for admiration or even thought. 'Backing up and getting the hell out of here!'

The more 'Loft', the more glancing will be the blow. (scattered Vectors of Compression)

Incidentally, striking 'Down & Thru' the Ball makes it go Up and Back Up!

A LITTLE LOFT TRIVIA:

There are some drivers on the market today that have lofts that range from 7.5 degrees down to the lowest I have seen and tried which was '**4.5 Degrees**'. I heard that Jason Zubeck had some test clubs that were as 'Strong-Lofted' as '3.5 degrees'. I noticed that he does not use them! No further comment!

Well just a little!

As the 'Face of the Clubhead' gets closer to vertical, less 'Loft or smaller Loft Numbers':

- 1) the flatter must be your 'Swing Plane' necessary to get the 'Launch Angle and Characteristics' possible to get the Ball into the air. Also the 'Squarer' must be the 'Clubface At Separation' as well. If it is at all 'Closed' the Clubface will, in fact, get even more 'Vertical'. Timing is critical.
- 2) If your 'Angle Of Attack' is at all 'Steep' you will not get the Ball into the Air unless you have

it 3" above the ground and cut under it which is called a 'Pop-Up'. The 'Top Plate' of your Clubhead will look all scared up or scraped up. We would see all kinds of these complaints come into our 'Golf Repair Shop' looking for warranty claims against poor quality paint!

- 3) Teeing the Ball up 'Higher' is not a realistic solution as it may have to be six or seven inches above the ground. One 'Long-Ball Hitter' I know well (It seems like a lot are Canadian) tees his Ball on a 3.5" tee inserted in the top of a 'BIC Pen' that is stuck in the ground! So his Ball is about 7 to 8 inches above the ground! ... and about 8 to 10 inches in front of his Target Toe! Not your average 'Set-Up Conditions'! Less lofts get 'Weirder By The Inch' !
- 4) Moving the 'BALL LOCATION' forward will generally not be a solution either because most people will just strike it 'Thinner' as the Ball just gets farther forward of the 'Bottom Of Swing Arc'. This really reduces the 'Net Effective Loft' even more and then it has even less chance of getting into the air. Fully 'Thin' where the 'Leading Edge' of the Clubface strikes the Ball at the 'Equator' is a 'Net Zero Loft'. Topped, 'Leading Edge' striking the Ball above its 'Equator' is a 'Net Minus Loft'.
- 5) the longer must be the Shaft to effectively contribute to the 'Flatter Swing Plane'. The Swing needs to be starting to look more like baseball than Golf.
- 6) the better must be your general ability to Swing a Golf Club, meaning great 'Tempo', 'Timing', 'Rhythm', 'Cadence', 'Pace', 'Spinal Stability', 'Target or Primary Lever Stability', 'Extension', 'Connection', 'RPM', etc. Need you hear more?

- 7) The better or purer must be your 'IMPACT Control' or your 'Optimal Percussion Area' accuracy. Your 'Sweet Spot' (OPA) must be right on the 'Butt of the Ball' or 'On The Screws' as the vernacular puts it.

I do not know about you, but I have heard about enough on this 'Low Lofted Numbers' to steer me well clear of having the least bit of interest in owning or even using one 'Free Of Charge'!

If you are still enticed by something you read that informed you that 'Stronger Lofted' goes farther and farther and farther, don't believe everything you read. If there were a smidgen of truth to it, all the Pros would be playing that '6.5 degree' variety with the 47" Shaft. Have a look in their bags! Then take a quick look at their bank statements! Must be some connection, wouldn't you surmise?

3) '**LIE**' is the angle that the 'SOLE' or bottom of the club makes to the centre of the shaft. For example the 'Sole' could be at 90 degrees to the 'X Axis' (centre) of the shaft and this configuration would be called very 'UPRIGHT' as, with the sole sitting directly flat on the ground, the butt of the grip and the shaft would be pointing straight 'UP'. As this angle between the sole and the centre of the shaft decreases, it is called 'Flattening' or 'Flatter' to vertical. So the three (3) 'Lie' criteria are 'UPRIGHT, STANDARD and FLAT'. When you hear of a player who has "3 Degree Upright" clubs, the toes of his clubs are all 3 degrees higher off the ground or level than standard. In other words, they are "Toe Up".

Each individual golfer has optimal 'Lie Angles' that perform best for him or her and it is the craftsman's obligation to fit the client with proper specifications.

4) '**BOUNCE**' is an intentional design condition of the sole angle of an iron, measured in degrees, in which the trailing edge of the sole is below or lower than the 'Leading Edge', thus the trailing or aft edge of the sole makes contact with the ground before the leading or cutting edge. This special design is usually an attribute of Sand Wedges.

As a rule, the greater the bounce angle, or simply '**Bounce**' the more the Clubhead can cut through tall grass or sand and resist travelling too deeply into that material. Thus, wedges with lots of '**Bounce**' are desirable for sand shots and lob shots from heavy rough or thick grass. Regular irons and wedges with less bounce are more efficient for 'Run-Up Shots' or 'Bump & Run', especially from normal turf or coarse, heavy sand.

The '**Bounce Angles**' vary from zero to in excess of 16 degrees or even more in a custom-build head. With 16 degrees, that is a lot of rear-end hanging down to strike the ground first.

There is a bird that lives in the Canadian north that has very large male body parts hanging below it's feet. The story has it that this bird makes a painful call upon landing and it has been named for this vocal rendition..... '**Ooo Ooo BIRD**'.

As you can see from the diagram, to determine the 'Physical Characteristics' of a 'Golf Head' we establish some 'Datum Points'. The 'Centre Line of the Shaft' is set 'Perpendicular or Vertical to the Level or Horizontal Datum Plane' as drawn. These are the two very basic reference lines.

FACE DATUM PLANE:

Better known as '**LOFT**' again is the angle that the Clubface makes to the 'Perpendicular or Vertical Plane'. This 'Physical Characteristic' of the Clubhead determines 'Launch Angle, Trajectory, Back Spin, Direction, Distance and more.'

From the diagram you can see that the '**LOFT**' is determined when the 'Centre Line of the Hozel or Shaft is Vertical or Perpendicular' to 'Horizontal or Level'.

SOLE AND FLANGE DATUM PLANE:

You will notice from the diagram that the 'Trailing Edge of the Sole' is 'Lower than the Leading Edge'. This is what we know as '**BOUNCE**'. When we measure or 'Calibrate in Degrees' the 'Line of the Sole' as it relates to the '**LIE**' we then know its 'Angle as it relates to the 'Vertical or Perpendicular Axis'.

Let's do the Math and see what comes up.

THE MATH:

The 'Loft' is measured at '56 degrees' (angle A). The Club is a 'Sand Wedge'. We want to know it 'Bounce'.

Next we measure the 'Angle or Number of Degrees', 'the Angle' between the Clubface and the Sole or Flange. We find it to be '48 degrees (angle B).

Next, we add 'Angle A to Angle B' giving us a total of '104 degrees'.

Now if we subtract '90 degrees' from the 'Total Clubhead Aspect' we arrive at 'Angle C which is 14 degrees'. This is the amount that the 'Sole or Flange' drops below 'Horizontal or Level'. We know this characteristic as '**14 DEGREES OF BOUNCE**'.

5) '**SOLE PROFILE**' refers to the actual shape of the very bottom of the Clubhead, in a similar vane to 'Bounce' as just discussed, but describing the flatness of the sole 'Toe to Heel' and not 'Front to Back' (leading to trailing edge).

Some Clubheads have perfectly 'Flat' soles while other are called '**Cambered**' which means they are 'Rounded Convex' having the very middle slightly lower than the toe or heel. This shape is sometimes called a '**Rocker Sole Plate**' for obvious reasons.

The mechanical purpose of this design is to make the initial ground contact very centred and resistance slightly more gradual than what might perhaps happen with an absolutely 'Flat Sole' where, in the perfect world, the entire sole makes 'Touch Down' simultaneously.

By the way, GOLF is not a 'Perfect World'!

6) '**FLANGE**', is a 'Sole Term' the refers specifically to the 'Width of the Sole' of the 'Distance from the Leading to the Trailing Edge of the Sole'. Your 'Sand Wedge' generally has the greatest 'Flange' and 'Bounce' which helps it's job get done.

7) '**GROOVES**', or the score lines / channels, in the face of the clubhead can vary. The six basic CLUBFACE GROOVE types or surfaces are;

- 1) SQUARE, 2) U- Grooved, 3) V- Grooved,
- 4) DIMPLED, 5) SMOOTH and 6) ARTIFICIAL.
(applied materials)

8) '**MATERIALS**' that heads are generally made of are 1) soft forged regular steel which is chrome-plated to protect it from rusting and corrosion, 2) alloy blends which means the foundry uses various combinations of metals to accomplish its task and 3) stainless steel which might be hardened or not. It may also be chrome-plated, brushed or finished to a polished surface or it may simply be 'Peened' to course or finer 'Vibrational Finish'. The heads can be found in a whole array of finishes from rough-looking to very highly chrome plated. The performance of the head is not radically affected by its finish, although, if you listen to the marketing 'Hype' you will hear differently.

I do not want to be seen as flippant toward the 'Cosmetics' of a golf club because if you like the look of your clubs you will feel more confident and certainly play them better, but from a physical or more stoic perspective, the differences are quite small. Fred Couples could make great shots with a 'Tomato Can Tied To A Broom-Stick'.

9) CLUBFACE MATERIALS:

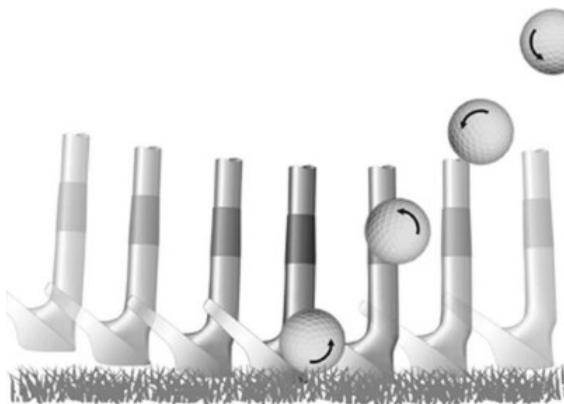
Over the past few years the Golf Head manufacturers have become quite exploratory and innovative in attempting to do two things;

- 1) Reduce 'Clubface Wear' on, especially the softer material forged Clubheads. When the touring pros or

diligent club pros, who both strike a very large number of Golf Balls in practice and play, come in to see us, we often observe considerable erosion of their wedge faces. There is a point in this wear and tear when performance is affected.

- 2) Reduce 'Groove Wear' or to simply 'Increase the Face Resistance' or 'Bite' that your Clubface has on the Ball. When your 'Grooves' lose their edge or sharpness, the reaction to 'Compression' or 'Ball Spin Rate' you create on 'Separation' becomes unpredictable. No player can afford 'Unpredictable Anything'!

LOFT and ANGLE OF ATTACK CREATE LAUNCH CHARACTERISTICS



'PURE SPIN GOLF':

One very innovative and now highly-respectable Golf Club manufacturer who has specialized in this 'Clubhead and Clubface' design, is 'PURE SPIN GOLF'. They have successfully produced the 'Diamond-Face Pure Spin' system of wedges with more to come.

This manufacturer has not only worked diligently on the 'FACE Characteristics' but also on the overall 'HEAD Characteristics'. These include the 'SOLE and FLANGE' aspects. Pure Spin has used the technique of 'Tour Grinding the SOLE' to produce 'Relief' or 'Flattened Surfaces' (one or more, up to four) to accommodate reduced 'Sole Surface IMPACT Drag'. You know the 'Trailing Edge of the Sole and Flange' enters the sand first before the 'Leading Edge', hence the term 'Bounce' as discussed earlier in this Chapter. Well, this 'Grinding' applies to tight hard lies as well. The 'Lies' become of considerable importance when in the grass as well as other materials such as sand. How tough is it to 'Extricate' your Ball out of the deep fescue, just heavy grass or off hard-pan? Clubhead and Clubface performance is very much a factor in these situations.

'PURE SPIN' has varied the 'Bounce and Lie' of its 'System of Wedges' so as to have 'Progressive Characteristics' necessary for high-calibre performance necessary when playing at demanding levels of the Game. I would highly recommend you're their investigating the 'PURE SPIN' product lines which will increase in the future.

I have a full set of their 'Custom-Fitted Wedges' in my bag and like them a lot.

19) SWEET SPOT:

This is also, more technically, called the '**OPTIMAL IMPACT AREA**' (OPA) and it means where one should strike the Ball so that the 'Kinetic ENERGY of the Clubhead' (MASS) can be most efficiently transferred from the 'Clubhead to the Ball'. This 'Optimal IMPACT Area' or location on the 'Clubface' is not generally in the 'Centre Of Measured Face' or in the 'Middle of the Clubface'. It is where the 'Mass of the Clubhead is totally Centred' and, as mentioned earlier, will never be on the 'Surface of the Clubhead'. It is an 'Internal Point' which we must make contact as close to as physically possible.

I have already explained to you where the various 'Head Styles' have their respective 'Sweet Spots'; 'Blade - Towards the Hozel'; Hybrids - Towards the Centre of Measured Face' and 'Perimeter Weighted Cavity Backs - Towards the Toes'.

You know there are ONLY 'Five Descriptive Locations on the Clubface'. They are 1)Heel, 2)Toe, 3)Fat or Top of Face, 4)Thin or Bottom of Face and 5)Sweet Spot.

The better you understand and control this knowledge the better you will strike the Ball and the better you will score.

20) **PUTTER HEADS:**

Fitting or selecting your 'Putter Head' is a process you should go through if you are an avid or 'Techno-Golfer'. This process is similar to the process of 'Spacing' your Iron Heads.

a) **Materials:**

- 1)metal, 2)composite, 3)wood

b) **Method of Production:**

- 1)forging, 2)casting, 3)milling, 4)injected moulding

c) **Face Texture:**

- 1)smooth, 2)milled, 3)grooved, 4)inserted

d) **Inserted:**

- 1)composite, 2)alloy, 3)polymer

e) **Weight:**

- 1)heavy, 2)medium, 3)light

f) **Weight Distribution:**

- 1)Toe Heavy, 2)Balanced, 3) Heel Heavy

g) **LOFT Angle:**

- 1)de-lofted, 2)zero, 3)lofted (usually less than six degrees)

h) **LIE Angle:**

- 1)Flat, 2)Standard, 3)Upright

i) **Cosmetics:**

1)Natural material, 2)Anodized, 3)Coloured(painted / powder-coated)

Once you get all these choices 'ironed out', you will have to select your 'SHAFT' which can be 1)Steel, 2)Aluminium, 3)Composite or 4)Wood. So far anyway!

Next you must select your 'GRIP' which again can be of numerous materials, including 1)Leather, 2)Rubber, 3)Composite, 4)other.

When you select either or both the Shaft and the Grip you again have to be aware of the 'Dead Weight' of the component as well as the effect it has on the overall 'Balance' of the finished product.

ASSEMBLY:

You already know from the discussion above that if you add weight to the 'Butt' of the putter, you will reduce its 'Net Effective Swing Weight'. In an 'Iron Head', if you install a heavier Grip, such as in an oversize model, you will reduce the 'Net Swing Weight' from say a 'D-3' to a 'D-2'. You can also, in your putter, add more weight to the butt by adding either 'Lead Tape' or 'Lead Powder'. This will decrease the 'NSW'.

Of course, if you want a 'Heavier FEELING Putter', more Swing Weight, you can add 'Lead Tape' (External) or 'Lead Powder' (Internal) to the tip of the Shaft and then 'Plug It'. This is a very standard procedure.

You can see by this section that the 'Sky is the Limit'.

NOW MAKE IT WORK!:

Once you complete this process, you then have to learn to swing the 'Putter Head' through the Ball with precise Clubface AIM, Clubhead PATH and strike the ball on the 'Precise Centre of Mass or Sweet Spot'.

If you are interested in some information on 'Making the Putting Stroke' you might simply turn to the 'PUTTING' chapters in this book. There is quite a lot of information to absorb.

The considerations and debates that surround the skill of 'Putting' will never conclude!

21) **WEDGE SETS OR SYSTEMS:**

When we go out with Dad or Mom to get our first '**SHORT SET**' of starter clubs, we may get five, six or seven pieces; another term for 'Clubs'. Usually we will become the proud and quite 'unaware of what is about to happen to me' owner of some Golf Clubs. A standard short set may include two **Woods**, (III & V), along with four **Irons**, (#4, #6, #8 and #P) and finally accompanied by that thing called the Putter and about which he says very 'Nasty Things'. So there you have it; '**A SEVEN PIECE SET**'.

Soon to follow questions:

'What is this 'Tool' that has the '**P**' on its heavy steel end?'

Well, we parents and teachers (somewhat similar in function and importance) explain that this 'Tool' is called a '**PITCHING WEDGE**' for some reason. We disclose that it has siblings, sisters or brothers. Then we are asked why they did not come along as a family. More answers. 'We thought you had enough on your plate for now, besides, more units in the 'Tool Family' means spending more money. At this time, Enough is Enough.'

TO THIS FAMILY OF WEDGES:

You may have heard about the '**P.A.S.L.X.**' (Pitch, Approach, Sand, Lob & Extreme) set of wedges. The 'Short Game' is key to scoring and winning. I think a 'Four Wedge Set' is key to 'Playing Golf'. Technically, you can get wedges that vary in 'LOFT' from 46 degrees all the way up to 66 degrees in one degree increments. The 'LIE Angles' vary slightly as well and you can order them about any way imaginable. Certainly 'Lie' can be custom bent from about 6 to 8 degrees 'Flat' to 8 to 10 degrees 'Upright' depending on the personal needs of the owner. It's complex world out there!

QUESTION:

'Dad, how many wedges are there and what can you tell me about them? When can I get another?'

ANSWER:

Well, we know there is this '**P WEDGE**' which does not stand for 'Performance' and, if you make a particularly poor shot, may stand for a yet another derogatory name! The standard 'Loft' of this

Tool's Head is approximately 48 degrees while the 'Length', generally in the 'Men's Steel Standard' (MSS) length bracket, is approximately 35.5 inches to 36.0 inches, depending on the 'Fit and Builder's Discretion'.

The next member of the family, perhaps a sister, is generally called the '**S WEDGE**' named after its designed purpose of extricating the Little White Ball from the 'Sand', hence the '**Sand Wedge**'. The standard 'Loft' is approximately 56 degrees and the 'MSS Length Bracket' is again between 35.0 and 36.0 inches, depending on 'Fit and Builder's Discretion'

There are more!

You may have heard 'Players' make the statement, 'I have too much room or 'Gap' between clubs'. What they mean by this is that there very Comfortable and Consistent, yardages '**between clubs**' is too far or big. So now what?

To overcome this '**A OR GAP WEDGE**', some resourceful servant of those insatiable Golfers, worked diligently, toiling over the 'Figure It Out and Design Table', burning the midnight oil, came up with the practical solution of producing a club that fit in between the 'Pitch' and 'Sand' wedges. It was given a 'Loft' of approximately 52 degrees with a length bracket of between 35.0 and 36.0 inches.

What do you think they called it, these diligent servants of those insatiable Golfers? With great imagination and practicality blended it was christened the '**GAP Wedge**'. Then there always has to be some dissident who, to be more unique than the other 'unique guy' came up with yet another name, the '**A or APPROACH Wedge**'. I can hear it now. Two mature, profit-driven leaders in the 'making Golf Tools industry' sitting around a very long expensive lawyer's conference table screaming threats interspersed with legalese profanity, 'I thought of it first and you can't call it by the same name!' So we have more than one name for the same 'Golf Tool'. 'Variety is the Spice of Life' and lawyers get rich enforcing this law of variables! I mean 'Variety or Trade Dressing! Sounds like lettuce and vinegar in a wooden bowl!'

The 'Loft' of this new specialty Tool is approximately 52 degrees and it 'Length Bracket' ranges from 35.0 to 36.0 inches.

You see, we still follow this '**SNAP ON TOOL**' concept of keeping the Ratchet the same, maintaining quite consistent 'Extension Length'

but simply varying the '**SOCKET-HEAD or Club Head**'. Amazing that the Golf lawyers and the mechanical tool industry has not come to blows over 'nomenclature'. Even Bill Shakespeare knew the scenario; 'What is there in a name?' Can you imagine the mechanics tool industry's getting a court order stopping us Golfers from calling the Clubhead a '**CLUB-HEAD**'? What would we call it?

Sound just a scosh childish? Welcome to the adult or mature life video in full colour. BOEING Aircraft apparently got an injunction against a golf club manufacturer for calling their composite driver head the '747 Series'. From such actions, one might assume that one big American company had to have been the 'Very First' in the history of mankind and recorded numerology to use these three numbers in this precise sequence and applied it to a product! Taken just one more slight forward (or backward) step, it now might appear that the use of any name in any industry precludes the use of that name anywhere in the civilized world for any other product. Perhaps the operative word here is 'Civilized'. Hasn't litigation and the focus and priorities of mature adults sunk to depths well below or lower in the 'Tank' that one might have ever thought imaginable?

I digress! Back to the 'Wedge System'. There's more!

So we have the '**P**' and this newer '**A**' and the old standby, old reliable Sarazen '**SANDY WEDGE**'. That is now '**P.A.S.**' Some resourceful soul thought that is the high flight of the 'S Wedge' is good, then higher may be better. Here enters, 'Stage Right' the next 'Sibling Tool', the '**L or LOB Wedge**' whose 'Loft' is approximately 60 degrees and 'Length Bracket' is between 35.0 and 36.0 inches. Some players may custom specify that their 'L Wedge' length be less than 35.0 inches. Well, it's their Tool and they can have it any length they so desire. As long as it works, they will be happy.

Still more to come you say!

The final wedge variety in the 'Family' is one with even more 'UP' built into it. This '**X or EXTREME WEDGE**' has a 'Loft' of 64 to 66 degrees and again a length of between 35.0 and 36.0 inches. This Golf Tool will take the 'Driving Range Stall Lights Out'! (the ones just above the hitting matt!)

A word of caution to anyone feeling courageous or adventurous enough to buy one of these radical devices; Don't look for it to

strike a Ball very far. Don't assume that you will be able to strike Golf Balls consistently 'Dead Stick' with it. Your relationship with this '**X Wedge**' may give new and real meaning to the Golf term '**Chilli Dip**'.

The clubs of the 'Wedge System' require some knowledge and mastery of a 'Dead Handed' golf swing made by a very solid Swing or Target Lever (Swing Radius) under a very 'Consistently Set and Tallish CHIN'.

A very positive note on these 'Short Game Tools' is that they all, when swung well, swing very similarly. There is not a lot of Lower Body Machine Motion. There is very carefully maintained Target Arm Radius with a very 'SOFT Elbow'. There are very 'SOFT Hands'. There is what I call 'Clocking' or very disciplined elevation of your 'Target Hand' in or at '**ANY**' 'Top Of Your Back Swing' (the 'AND' '&' Position). You need to learn especially the 07:30 (short Clubhead Travel and thus short Ball Flight), the 09:00 (medium Clubhead Travel and medium Ball Flight) and then a third Set Point called the 10:30 which is a relatively extended Swing Circumference Length resulting in a relatively longer Ball Flight.

You already know that the 'Variable Loft' of the Tool or Clubface is the 'Factories Way of Creating Trajectory' and that we must NOT help the Ball get into the air. We must FEEL NO MUSCULAR LIFTING MOMENT or ACTION in our forward swings (Swing SEGMENT #2F) and through Impact (Swing SEQUENCE #3). You must FEEL very 'Bottomed or Deep, Flat and Wide' in both the Take Away and T H R O U G H that Impact Zone from which the Ball Goes Away.

LIFT DESTROYS LOFT

The old cliché is that 'We should let the Clubhead do the work'. And we should do just that. Makes sense to this Country Boy Golfer and Teacher!

You '**CAN MASTER**' this 'Short Game' and the use of its Tools, the Wedge Family, as well as anyone can, pro or duffer. It all depends on your desire, acquired accurate knowledge, level of practice investment and determination. **The 'Short Game' is 'NOT a simple function of POWER'**. If you have any doubts, just look at the female tour players who can take the men on inside 80 to 100 yards at any time and make a match out of it!

The better your 'Short Game' the more money you will take to the bank the more FUN you will have. Golf can and will give every one of us a great deal of PLEASURE, just more to those who practise and play smarter; to those who better earn it!

22) **SWING WEIGHT:**

This specification or property of your completed golf clubs is very important. Swing weight means the '**PULL DOWN MOMENT**' of your golf club. When it is held in both hands, extended in front of your tummy, level to the floor, you will feel as though the head is being pulled toward the floor or ground. The heavier the head, the more weight or 'Pull Down' you will feel.

Of course, as mentioned above, this swing weight varies based on two (2) criteria;

- 1) **the actual 'Dead Weight' of the head** and
- 2) **the 'Length Of The Shaft' (Arm).**

$$\text{WEIGHT} \times \text{ARM} = \text{SWING WEIGHT} \quad (\text{balance})$$

If you were to put a standard #5 iron head on a twenty foot long shaft and then held it 'Level To The Ground', you would feel considerable strain or 'Swing Weight'.

'**SWING WEIGHT**' is named or categorized in an '**Alpha Numeric Scale**' that progresses from A-1 through A-9, to B-1 through B-9, to C to D to E etc. Most men's swing weights are found in the higher C and lower D categories.

I do not think, especially for the average golfer that Swing Weight must be critically specific. I mean that you need not have precisely D-0 or D-1, but, whatever you have in one club should be 'Consistent' throughout you entire set.

Your tools must be 'Swing Weight Bracketed' so that when you select any club out of your bag, it is always going to 'Feel' similar to the others. As players develop more specific 'Feel' they will acquire a desire to play one specific Swing Weight and should, at

that time in their Golfing Career demand quality product assembled to precise consistent specifications. You do not want to either guess or have to remember a myriad of different tool performances in one bag. Consistent tools make for consistent results.

Your optimal situation is

'TWO SWINGS' and 'ONE CLUB SPECIFICATION'.

A point of interest is that the 'I.R.G.O. 555 GOLF' building criteria and equipment capability no longer determines your Swing Weight to 'Tenths' (1/10th's) as in the above system. For example in a 'D-1' swing weight, 'D' is the major bracket and '1' is the tenth factor.

Our 'Master craftsman' using highly-advanced equipment, now build to a ten times more accurate '100th' scale. Our criteria is to build to, for example, 'D-1.3' and so on. This level of accuracy is simply a matter of equipment and dedication to it's fullest use.

It may well be considered 'Over-Kill' but precision and it's quest serves the customer well and we intend to continue striving for more 'Truth and Trust' in your equipment.

23) **BRACKETTING:**
 (consistency)

This is a term used to describe the 'Range of Variation' and physical properties or criteria as above discussed. It relates to '**Consistency**' of your equipment. If your clubs are all the same, they are 'Bracketed'.

BETTER CLUBS HIT BETTER SHOTS

It is difficult to envision and create a 'Consistent' swing and performance with equipment that is NOT.

It is the persistent, talented and sincere objective of 'Custom-Fitting' to match the equipment to the athlete. If this is accomplished we at the 'I.R.G.O. 555 Golf Stores' refer to the specifications as 'Player-Bracketed'. In other words, when

consistent club criteria is matched with realistically and accurately determined player characteristics, you have a winning or improving combination.

It is much more important that your clubs are all the same or 'Bracketed' from one end of your bag to the other than it is for your clubs to be precisely the correct fitted LENGTH, LOFT, LIE, SWING WEIGHT or FLEX. However, this is NOT to prescribe that perfect is unnecessary! GOLF may not be a '**Game Of Perfect**' but is should be an 'Exercise In Precise'! After all, when you are buying equipment, that is what you are paying for.

24) **MENTAL CAPACITY:**

Through the mental comes the physical. Through the physical comes the results.

TRUST YOUR CLUBS. TRUST YOUR SWING.

Your present clubs might be relatively close to your needs or 'Bracketing' and if this is the case, you should know they are close and get comfortable.

A set of clubs that are '**All The Same**' and reasonably close, can be adjusted to by you. As long as they are '**All The Same**' you can make very slight swing adjustments and thus get used to them. If your clubs are very inconsistent, some stiffer than others, swing-weighted differently, etc. you cannot really 'get used to them' as they are a mystery.

I have a friend whose #4 iron is about the same loft as his #5; his #6 iron is the same frequency as his #7 but both of these are a full 'Flex' different than the rest; and his lies are variable. This fellow can hit these clubs all very accurately and to the correct performance. He adjusts his #4 by ball position to produce the proper loft and ball flight. The same talent is applied to his #6 and #7 so that his distance is consistent with his other clubs. He adjusts his 'Power Level or Impact Torque' to get the desired results.

I have not got that good a memory, so as to be able to remember all the nuances in such a bag. My mental capacity is used to it's fullest forming my shot image, determining yardages, developing a flexible play strategy and lastly, executing the shot precisely to the target.

I do not know about your mental Capacity !

25) **TONGUE IN CHEEK:**

I always, tongue a little in-cheek, tell our wonderful customers that;

**'Your new set of custom-fitted clubs
comes with a liability!'**

They take a small, shallow breath thinking they have been duped and without having to ask 'The Question', I explain what I mean.

**'You can now no longer blame your clubs
for the bad shots!'**

It's true. My clubs are perfect and when I strike the ball poorly or strike it well I never blame my clubs. I just thank them for being of service. The problem is in the mirror. This easily attainable reality of owning quality fitted clubs is simply a matter of the very reasonable expense of a new set created by a craftsman who knows and cares.

This set of clubs should be affordable and are likely long-overdue. The 'I.R.G.O. 555 Golf' or any professional builders' custom-fitted, steel-shafted, pro-quality, stainless steel headed, life-time parts and labour warranted, 'Personalized' (your name goes on your clubs) tools will make a difference.

26) **SPACE AGE TECHNOLOGY:**

The current trend today is toward 'Bigger Heads', 'Longer and Lighter Shafts' and many more different compounds and designs of grips.

How much of it is real value that directly improves our performance? How much of it is questionable value that might indirectly make us feel better and thus create improvement? How much of it is 'HYPE'?

As long as there are dynamic marketing minds in the equation, there

is going to be 'Hyper-HYPE' which we are quite exposed to in the is era the industry.

The '**BIGGER HEADS**' are said to have a "**Bigger Sweet Spot**" but it is scientifically interesting to note that technically the 'SWEET SPOT' is a finite tiny spot or point on the Clubface.

It is not an ever getting bigger area. It is the point on the face that is closest to the 'Centre Of Mass' which may very well be inside the Clubhead and NOT on it's face surface. Nevertheless, there is a region on the face that contacts and transfers energy to the golf ball to optimum efficiency. This is really what we mean by this 'Sweet Spot'. This '**OPTIMAL PERCUSSION AREA (OPA)**' is getting bigger.

I agree that bigger heads have more tolerance for off target IMPACT and are more 'Forgiving', but if at IMPACT your Clubface is '**AIMED**' off Target Line, your ball is going to fly where the face is pointing at Ball from 'Clubface Separation', the biggest of all bigs or not.

27) **MADE OF DIFFERENT STUFF!:**

It begs to be added that this '**TITANIUM**' crusade is enormously over stated and has been marketed to the hilt. High-quality stainless steel and aircraft grade aluminium are equally quite as capable of transferring energy efficiently to a golf ball as the other.

The driving force behind titanium's use in golf club heads was exceptionally high failure rates in the 'Oversize, Midsize, Jumbo' heads due to the problematical 'THINNESS' of the material that was having to be stretched over greater surface areas as the size or '**CUBE**' increased. The '**GRAM WEIGHT SPECIFIC DRIVER HEADS**' at approximately 205 to 215 grams dead weight necessarily spread the material too thinly and exceeded the rupture envelope. Failure ensued.

The warranty departments went into convulsions and came up with lighter stronger titanium alloys to counter the failure rates. It worked and in the process the \$250.00 to \$350.00 exotic drivers reached a new level of ability to extract funds from good people who golfed. The price of entering the golf stratosphere where we are told no one had ever ventured, was now \$550.00 to \$650.00 depending in what country and where you bought your new 'It Will

Fix Everything Golfing Tool'. Eternal hope is a great thing!

But the new era 'Titanium' and even more exotics coming at us in the near future, reduced the equivalent dead weight and thus made some new trends a reality, for better or worse.

Fasten your curious seatbelts and wallets, there is more 'Space Age' to come very soon! You can rest assured the price tags will enter or remain in this stratosphere as well! Imagine \$400 to \$600 for just one 'Golf Tool'. I thought there were few lifetime investments; you know the wedding ring and the house. Now we might have fourteen more. And they come in but one 'Over Your Shoulder Bag', with no ribbon and a perhaps a person to carry them. It has a name that sounds something like 'Cuddly' and costs about 10% of your earnings. Sounds like a marriage to this old country boy.

Oh well. Golfers lives, happiness and misery, are meant to be shared. Perhaps he, or she, does laundry and dishes.

The '**LONGER LIGHTER STRONGER**' newer material shafts are also a reality but one must be extremely careful not to be caught and consumed in the hype that definitely also surrounds the shaft.

Once the heads got lighter, designers could increase overall club length without sacrificing balance and reasonable 'Swing Weight' parameters. A men's standard steel shafted driver at 43" long usually produced with a standard cube metal head at roughly 210 grams a D-1 to D-2 swing weight. For every added inch in shaft length, the effective swing weight would increase about 6 to 8 points. In other words a D-1 would become a D-7 which in the hands of most players is quite heavy and may obscure feel and encumber your ability to swing the Clubhead in comfort.

Of course, professional Club makers can counter this increase in Swing Weight somewhat by either increasing actual grip weight or by adding artificial weight to the butt end of the golf club. In doing so, they increase the 'Dead Weight' or overall weight of the Golf Club which may be negative.

Graphite or '**COMPOSITE SHAFTS**' were naturally lighter inch for inch than steel and so, without any to-do the clubs were built to what we technicians call '**Graphite Standard Lengths**'. Men's standard graphite length became 43.5" and worked very well indeed. The standard steel wood shaft weighed approximately 120 to 130 grams

while good quality HM35 and HM45 graphite shafts weighed in at approximately 90 to 100 grams. That is a considerable difference. Newer production methods and better materials have over the past year or two reduced weights in the '**Ultra-Lite or Super-Lite**' graphite shafts to under 50 grams! Now that is very light indeed.

It is still, in my opinion, 'Dicey' for powerful hitters to use such extremely light models as they are inherently very thin and especially in the '**A FLEX**' or tip area they are susceptible to failure. However, I think technology will advance and avoid such warranty problems as has been the case in the past.

28)

SUPER-LITE SHAFTS

married to

ULTRA-LITE TITANIUM (or space age material) **HEADS**

As soon as the heads got stronger and lighter, the Net Effective Club Length grew creating greater Clubhead Speed through simply physics. When the 'Rotation Speed' of the body spine, our 'Driveshaft' remains constant and the overall length of the golf club or swing radius is increased by using a longer shaft, the Clubhead Speed increases and so directly does the 'Ball Launch or Separation Velocity' and thus the net air and roll DISTANCE. We can all be drawn to buy some more of this 'DISTANCE' commodity, but at what cost?

When the overall length of the golf club exceeds a certain point for each and every one of us, we suffer from control loss. Thus we might strike the ball farther, but if it is not straight, 'Farther in the bush is not an attribute'. 'DIRECTIONAL CONTROL' in Golf is essential, in fact it is significantly more important than Distance.

'Longer in club-length is generally NOT better when it comes to the average golfer's needs and performance'.

Q14)

'THE WOODS ARE FULL OF LONG DRIVERS.'

Harvey Penick

Every builder and experienced technician knows this fact all too well. Now I might add so do thousands of those smitten '**BIGGER - LONGER - BETTER**' minded consumers. Golf shops and closets all over the world are full of 'Tried It And Did Not Like It' clubs. Trade-ins are a significant part of our overall hard goods business and many of them were \$550.00 to \$650.00 only weeks before!

29) **CAVEAT EMPTOR:**
 'Buyer Beware'

Sorry to say, but the more you pay for a club, the more your expectations soar and then the farther more the owner is deflated on realization that '**We Cannot Buy A Swing**'.

The farther away from your 'Sternum' the Clubhead gets, the more POWER that is required to control it. Once a club exceeds reasonable personal limits in the area of 'Overall Length' it will no longer cooperate. The owner will either NOT have adequate hand strength or sufficient timing and discipline with which to operate this new technology. Incidentally, when these new era 'Ultra LONGS and LIGHTS' become much over an inch or inch and a half longer, they CANNOT maintain a median swing weight such as D-1 or D-2.

The 46" and 47" clubs are weighing in at about D-6 to D-9 and that is considerable Swing Weight by any criteria!

There are new designs and component combinations that are planning on employing swing weights that exceed E-3 to E-4 but I would caution any person who 'THINKS' this will be no problem. Best you borrow one for an extended period to thoroughly evaluate the postulates before you put down the cash! That's a whole lot of swing weight.

One real aspect that is a permanent absolute factor in this golf club business, relating especially to new age drivers, is the fact

that longer means the head, what ever it's material or shape, is farther from your 'Navigator Hands'.

This may sound too obvious such that it may appear to initially be somewhat facetious. I am far from that. I am carefully, prudently and scholastically sincere. As soon as your 'Swinging Clubhead' gets farther away from your 'TORSO CENTRE OF ROTATION' (your sternal to spinal centre) you require more POWER which includes all the factors in this subject including TORQUE, TEMPO, BALANCE, RHYTHM, PACE, CADENCE, LEVER EXTENSION etc. There is a finite '**PERSONAL POWER LIMIT**' which once exceeded causes you to lose control of the Clubhead. This so simply creates more bush than fairway. That is not 'COOL'! If you are bordering on exceeding this '**P.P.L.**' you must take a step back into reality and recall commonsense along with a shorter shaft and overall reduced club length.

I personally think the equipment technology has far outrun the quality, availability and receptivity of teaching in this great Golf industry. Only when one has the earned skill necessary to swing a 46 or 47 incher will it perform to expectations. When those expectations fall short, frustration, resulting tightness and even anger more than erase the '**PERCEIVED BENEFIT**'.

30) **ROLL AND CARRY:**

These are two terms that get bantered about regularly in this wonderful world of GOLF. '**ROLL**' is what the ball does while moving forward and in contact with the ground. '**CARRY**' is what it does while advancing in the air before making contact with Mother Earth.

I want to make it quite clear that you get more distance out of '**CARRY**' than '**ROLL**' so if you have any misconceptions that getting the 'Little White Ball' on the ground with a draw so it can take advantage of the better roll of a counter clockwise ball rotation creating over-roll due to the draws tendency to transition to this characteristic than the opposite produced by the fade, rethink.

Always think 'Optimalization'. What can I do to create my absolute best opportunity to score, that is to get the ball into the cup in the least number of strokes?

'CARRY' produces more distance. From a driver's standpoint then carry makes more sense than roll. Why does 'Carry' go farther than 'Roll'? The answer is simple and here it is in question form: What presents more '**Ball Resistance or Ball Friction**', AIR or GRASS? 'Flight Time' is generally more desirable than 'Ground Time', especially when your objective is getting from Gate 41 at Vancouver International to Gate 72 in Amsterdam! It's a long way to taxi!

**Aircraft Go A Lot Faster And Are Far More Efficient
When Airborne. So Is Your 'Golf Ball'.**

31) **MY BIG GUN:**

Your longest driver, or the longest driver for you is the one with which you can hit the most fairways farthest from the tee. If you are not in the fairway, any distance advantage you may have created is more than lost in getting back in the 'Short Stuff', in getting '**BACK IN PLAY**'.

32) **GOLF CLUB HANDSHAKE RULE:**

It is important to realize that every club selection or shot that is before us was, a very short time ago, preceded by a very different shot with and equally different tool. An approach shot to the green (#SW) may have easily been a 'Full Swing Driver' which was loaded into our mind computer. Thus all the Driver data is still, practically speaking, loaded on our mind's screen. It needs to be erased or deleted before we entertain executing another shot with a very different club.

The '**GOLF CLUB HANDSHAKE**' (our I.G.A. 555 GOLF ACADEMY '**Tick Tocks**', 5 EXECUTIONS) accomplishes this transition with the simplicity and reliability of an old bush pilot's finding his way about and home after a full day's churning up the northern Canadian

airspace dropping off supplies to needy and very appreciative rugged pioneering spirited folks inhabiting those reaches.

This '**Golfer's Handshake**' is one of the great courtesies of this game. It will be recognized by any club as a sign of the quality of the individual who is about to apply a swing.

Whenever trying new equipment, BIGGER LONGER LIGHTER FARTHER, do a few minutes of '**TICK TOCKS**' before putting the new 'Wonder Stick' to work. Do not just step up and start striking balls.

In your warming up and getting the 'FEEL' of the new tool, make sure you can 'FEEL' the 'Swinging Clubhead' at all time throughout your swings, from 'BOTTOM to TOP to BOTTOM and THROUGH the Ball' all the way EXTENDED right Down the Line to the Target PIN.

If at any time you lose the 'FEEL' of your Swinging Clubhead '**FIND FEEL FAST**' (I.G.A. 555 GOLF ACADEMY 3 F's) and if you cannot, do not further consider making the purchase. When we lose Clubhead Feel, we lose most everything. When we cannot even produce it in the first place, mount up and get the hell out of Dodge!

33) **CONCLUSION:**

'Festina Lente'. 'Make Haste Slowly'. 'Fools Rush In Where Angels Fear To Tread'. 'Buyer's Remorse'.

See if you can 'BORROW' one of those wonder sticks that you are drawn to buy for at least a week and use it every day during that period. Quietly and thoroughly assess it 'Before' you lay down the cash! It needs to work every day or your old stick should still do the job.

Q15)

"Give me a banana. I'm playing like a monkey,
I might as well eat like one!"

Chi Chi Rodriguez

Q16)

"I was afraid to move my lips in front of the T.V. cameras. The commissioner probably would have fined me just for what I was thinking."

Tom Weiskopf

(after taking a 13 on the 12th in the 1980 masters)

Q17)

"I started my career off very slow ... then I tapered off."

Gary McCord

C13]

GOLF BALLS

Q18)

'The balls used in top class games are generally smaller than those used in others'.

Paul Fussell

Conjures up visions of Denis Rodman and his basketball compared with Fred Couples and his little 1.6 in Golf Ball. Seems like quite a mismatch of quality, image and performance, to me at least! Thinking of role-models for our teenage sons?

Q19)

'The real test in Golf and in Life
is not in keeping out of the rough,
but in getting out of it once we are in'.

John H. Moore

Nevertheless, avoiding it makes good sense!

Q20)

'Nothing increases your Golf score like witnesses'.

Anonymous

Q21)

**NOTHING MOVES FASTER THAN A GOOD THOUGHT
DISAPPEARING FROM THE MIND OF A GOLFER!**

Make notes in a little book which should always be in your regular bag or back pocket next to your score card. (After making your shot, good or bad, 'HOLD YOUR FINISH POSITION' just four a moment so as to record the results in you 'Mental Memory Bank'. If it is a great shot (Distance and Direction), hold your position longer so you can 'Save The Shot' better, with some permanence for future use.)

CLUB FITTING

Job For A Professional!

1) BETTER TOOLS:

This aspect of owning 'Golf Tools' that are custom-fitted, or even if they fit by accident, is of significant importance to your game. Remember, one of our 'I.R.G.O. 555 GOLF' mottos is the simplest statement in golf

'BETTER CLUBS HIT BETTER SHOTS'.
(mentally & physically)

which again leads me to say

'TRUST YOUR CLUBS' so you can learn to **'TRUST YOUR SWING'**

(we must play in that 'Trusting Mentality')

My precision clubs are perfect and never make mistakes! And I would never blame them for any mistake I make. Having made a poor shot, I apologize to the club and gently place it back in the bag. Strange but true!

2) WITH A GOLF CLUB?:

When you come to the realization, scientific or not, that a Golf Club positions a player's hands 35 inches to 46 inches, more or less, from a Golf Ball that is a minimum of 1.68 inches in diameter that must be struck precisely by a relatively small Clubhead at the Bottom of Swing Arc (BOSA) after it's having travelled on a minimum round trip, '**UP & DOWN**', of approximately 50 or more feet, you become aware of the importance of using tools that conform to your personal requirements. A great Driver strike is a 'Moon Shot'.

3) OF INTEREST:

You may find it of interest that a golfer of Ernie Els stature, say with a 26" 'Swing Arm' ('Target Shoulder Socket to Second Knuckle of the Target Index Finger') holding onto a 46" overall Golf Club producing a net '72" Swing Radius' moves the Clubhead in a full circle that has a circumference of $\pi \times D$. ('Shoulder Socket to Sole Plate of Clubhead') Diameter is twice the Radius. Therefore, $D = 2 \times 72"$, $D = 144"$ ('12 Feet'). Therefore, the Circumference = $3.1415 \times 144"$ or 452" divided by 12" concludes that the circumference of one circle is about '37.66 FEET'! Ernie's full Clubhead Trip, very start of Back Swing to absolute finish of Front Swing, is much more than one full circle.

I know there are some purely Physics or Mathematical factors that come into play such as the Wrist Break Angle which reduces the actual T.O.B. Set-Up Swing Radius, but at this juncture, we can leave this consideration for another day.

Now consider the entire swing, that complete 'Clubhead Trip'. From Address, that 'TAP TAP TAP BALL LOCATION', to the completed back swing where the Clubshaft is parallel to the ground and the Clubhead is pointing directly to the Target, the Clubhead has travelled 3/4 of a circle or 28.0 feet.

Now getting back to the 'Bottom Of Swing Arc' or address where it started adds 28.0 more feet of travel.

Moving Powerfully 'THROUGH IMPACT & SEPARATION' with a swinger's 'FOLLOW - FINISH' where the Clubhead often ends up pointing directly back at Address, or even farther forward, the Clubhead has travelled another '**FULL CIRCLE**' or 37.66 more feet.

This type of realistic 'Clubhead Swing Path' has caused the Clubhead to travel a total 'Back and Front Swing Clubhead Travel Distance' of $28 + 28 + 37.66 = 93.66$ feet.

WOW!

Note again that the 'TOB to IMPACT & SEPARATION' ('Swing Segments

#1F and #2F' and Swing Sequences #5, #6, #6a, #7 and #8) are the 'Acceleration and Strike Interval' during which the 'Clubhead' travels about 28 feet ('3/4 circle') in half a second, whereby the 'Clubhead SPEED' reaches about 120 miles per hour ('176 Feet Per Second') or more with Ernie Els.

There are some superhuman who can achieve 'Clubhead Speeds' of over 160 miles per hour! It is complex math, but that is why the 'Terminal Velocity Ball Speeds' are orbital and cause golf balls to cover ground in excess of 400 yards! Not any time soon for this 'Country Gentleman Golf Teacher'!

Keeping this 'Length Measurement' in perspective, a highway transport truck trailer is about 45 feet long, so the above swing is twice as long as a transport truck trailer. Surprised? So was I!

4) **THERE'S MORE!:**

The 'Duration' of an 'Els-Class Swing' is about 1.5 seconds. The Clubhead starts its trip from Stopped At Address', travels to stopped a Top Of Backswing ('TOB'), accelerates to maximum Clubhead Speed at and THROUGH Bottom Of Swing Arc ('BOSA') and then proceeds to bleed of speed to it resting position at fully completed FOLLOW - FINISH which is our Swing Sequence Position #8a - #9 - #10 and #11. This 'Clubhead Travel Distance' equals about **93.66 Feet!**

OF MORE INTEREST!

From '**T.O.B. to IMPACT**' the Clubhead accelerates from 'Zero To As Much As 130 Miles Per Hour' for individuals like Ernie Els. Again, there have been Clubhead Speeds recorded in excess of 160 MPH but not by a real people!

Let us consider an IMPACT Clubhead Speed of 120 MPH which is 176 Feet Per Second. This 'Golf Athlete' has created 'SOME Clubhead Speed ACCELERATION'! .. 176 Feet Per Second. This 'ZERO to 120 MPH' took place over a 'Front-Swing Distance' of approximately 28 FEET in about .5 seconds or generally less. 'ZERO to 120 MPH' in .5 seconds makes a Double 'AA' Nitro Fueler (engine parts controlling explosion) or the most powerful dragster in the world look average.

The Clubhead moves '28 Feet in 1/2 a second', but is travelling at a speed of 176 Feet Per Second (120 MPH) at the end of this 'Clubhead Path Front-Swing Travel Distance'.

Now that's Acceleration and raw horse-power! More later.

The Clubhead purely causes the Ball Flight Distance.

**We Professional Clubfitters, GOLFSMITHS,
have to determine and locate a Grip, Shaft and Head
combination that 'FITS' this level of performance.**

We work as diligently and caringly to fit any of you!

5) **NOW TO THIS FITTING:**

Fitting can be broken down into some very logical and easily-understood patterns which I want to briefly present to you for your interest.

I suspect that what I am about to present to you is going to appear even more complicated than you might have thought, but fairly, it is for we professional to tend to this more complex side '**For You**' so having fun and performing well can be your primary task. Not unlike your very special doctor, it is up to him to understand, determine and prescribe. Your job is to know generally, or more specifically if you so desire, what is taking place and then to assist or cooperate to the best of your ability in improving. If you want even more detailed information, you may seek it out

from various sources or simply call one of the I.R.G.O., I.G.A., IKABOD LONGZIPPER's or affiliated golf shops and they would be more than pleased to assist you. A very beneficial process to go through is to have your swing analyzed and your clubs inspected for fit. Once you have done this with a trained professional you will accurately know where you are and might best be heading.

A wonderful side of having properly fitted clubs is that when you strike a poor ball, you know 'what', I mean 'WHO' to blame. You might say "How can not getting off the hook, not being able to blame my clubs, be beneficial?" and the answer is very simple indeed. The 'Great Game of GOLF' is practical, sometimes painfully so, and fair. Most good comes the 'Old Fashioned Way'. You have to earn it. For any of us to have a '**FALSE OUT**' in blaming our equipment is really doing ourselves a disservice. Far better to take it on the chin and get on with improving the fault and not fall back on a convenient excuse. That great swing available to and in all of us is a wonderful fix!

So '**HOW**' do we go about practically fitting golf clubs to a customer? By gathering 'Client Information' as follows:

A) **PERSONAL INFORMATION:** including Height, Weight, Age, Years Playing Golf, Handicap, Average Score, Average Greens in Regulation, Average Putts, Up & Down in Two Percentage (Sand Saves and Chips), Rounds per Week, Practice per Week (Long game and Short Game) and any Physical Discomforts or Disadvantages.

B) **CURRENT SET MAKE-UP:** including specific Woods, Irons, Wedges (Pitching, Approach, Sand, Lob), Putter, Favourite Clubs, Disliked Clubs, Longest Clubs Hit Well (Wood and Iron)

C) **BALL STRIKING TENDENCIES:** This should be broken down into club groups such as Driver, Fairway Woods, Utility Woods, Long Irons, Mid Irons, Short Irons and Wedges.

Each category should be analyzed into '**Shot Pattern**' and estimated '**Carry Distance**'.

D) **PLAYING GOALS** are important as one must know his or her

aspirations which directly affects the general equipment choice. In this area we should consider current playing weaknesses that we want to improve such as wanting to HIT Woods and/or Irons HIGHER, LOWER, FARTHER, STRAIGHTER, stop Slicing, Hooking, Pushing, Pulling, Topping (THIN), Bottoming Out (FAT). We would catalogue your general performance in the areas of DISTANCE, DIRECTION, ACCURACY and TRAJECTORY (Shot Shape or Profile or Ball Flight) as well as look to improve Clubhead Feel with specific attention to KICK POINT ACTION, HEAD FEEL throughout the swing, and GRIP COMFORT. One might desire more or less BACKSPIN or what we call BALL ACTION and more.

E) **EQUIPMENT PREFERENCES** is important. You might prefer real WOOD WOODS made of persimmon, laminated maple blocks or even some exotic specie such as ironwood or other choice. After all, this is a personal game in which our wildest dreams may be satisfied!

You may desire Metal Woods Heads, Graphite, Titanium, Aluminium, Stainless Steel, Forged and Plated Steel, Investment Cast, Standard Weight Shafts, Light Weight Shafts, Ultra Light Shafts, in Graphite, Composite, Steel, Titanium or something else that is sure to come along soon. Your flex preference (vs. NEED) is important. Grip preference may include standard rubber, half cord, full cord, all in various textures and tackiness. You may like real leather or some extra soft-cushioned style, ribbed (memory) or round, standard sized, oversize, undersize and even more. One of the 'Arthritic' styles may provide more comfort by choice or necessity.

It is our job to create 'Confidence, Comfort and Consistency' (the I.G.A. 555 GOLF ACADEMY **3 C's**) and thus we would certainly ask you to define or list your 'DISLIKES' as well. One should never in this day and age of enormous choice, use any equipment that does not 'Turn Our Cranks'! The mental aspect should be fully satisfied so that we can go to work on the physical.

6) **EQUIPMENT SPECIFICATIONS:**

Now this is another wide range of focus and consideration which includes such 'Make Up' items as:

Loft, Face Angle, Lie, Sole Profile (Bounce and Centre of Gravity or Mass), Woods Bulge and Roll Characteristics, Component Dead Weight, Total Dead Weight, Balance, Swing Weight (specifically

adjusted), Length, Shaft Model (Flex), Bend Point, Kick Point, Frequency, Symmetry, Duration, A-Flex Torque, Recommended Swing Speed Range, Swing Profile (Full or Abbreviated), Specific Driver Shaft Weight, Grip type and weight, texture and size.

All the above shaft and grip choices or options may vary from woods and irons including for long, mid and short, an example being that we often use a programme of 'Progressive Grip Sizing' where one's driver or long irons would have under-listing or extra wraps, larger grips, than the mid and shorter irons. This facilitates adjusted Hand Speed as discussed in various locations throughout the book.

All this 'FITTING' takes on importance in the PHYSICAL ASPECT of our games. Our specific equipment performance includes definition in '**PRIMARY AREAS**' such as ACCURACY, FEEL, DISTANCE, TRAJECTORY AND BACKSPIN.

The above '**PRIMARY AREAS**' are directly or indirectly affected by equipment properties such as LIE, FACE ANGLE, SOLE ANGLE, SOLE RADIUS, SOLE WIDTH, LOFT, HORIZONTAL BULGE, VERTICAL ROLL, FACE PROGRESSION & HOZEL OFFSET, GRIP WEIGHT, GRIP SIZE, SHAFT FLEX, SHAFT TORQUE, SHAFT DEAD WEIGHT, SHAFT BEND POINT, SHAFT BALANCE POINT, LENGTH, SWING WEIGHT, TOTAL DEAD WEIGHT, CLUB NET BALANCE POINT, WEIGHT DISTRIBUTION, CENTRE OF GRAVITY and possibly even several more obscure facets of this equipment game.

We are learning more all the time and will keep you both informed and current in this equipment field if you only come to see us and ask questions. Properly fitted clubs open the door to playing successfully in both mind and body.

7) **CUSTOM-FITTED:**

Properly fitted equipment is within reach and affordability of any person who can step up and buy it. The actual '**FITTING**' should simply be a matter of courtesy and doing business. Would anyone buy a pair of boots without making sure they were personally correct? Would you be prepared to pay a surcharge for being fitted? Of course not! Making the choice to be fitted in GOLF is exclusively in your hands and should not be a financial burden. If you can afford reasonably good quality new clubs, you can afford '**CUSTOM-FITTED**'.

The benefits make the time investment in doing so very worthwhile.
Don't put it off any longer.

8) **FITTING CHART:**

Now that we have all this subjective and objective 'Customer Data', we need to compile some results and conclusions so that the 'Building Technicians' can proceed to assemble the client's new Golf Clubs.

When done properly and precisely, your 'TOOLS' as I told you before, will have a very new 'Inherent Problem'; they can no longer be blamed for your 'Errant Shots'. Unfortunately it is now, as has always been the general case, the fault of the 'Swinger'! You will learn to really find 'Confidence' in this 'Custom Fitting'. When shots as errant, you will know the 'Club Specifications' are bang on what you require to 'Play Like A Pro'.

Everyone likes his 'Custom Fitted Clubs'. Now you can 'TRUST YOUR CLUBS' and learn to 'TRUST YOUR SWING' without further delay.

Oh, don't neglect to find that 'Personal Pro' who can give you some gentle nudges on occasion to keep you out of the ditches that lurk beside fairways. He or she is worth their 'Salt'.

Remember, the 'Technician' will have done a 'Swing Analysis', either in the 'Short or Long Form' prior to your actually being 'Fitted' so there is a significant amount of 'Personal Data' compiled on which to base decisions. This stage is simply the gathering of specific 'Physical Measurements' to use in the final calculation of your equipment specifications.

If you had the pleasure of a 'Full Fitness Evaluations', either 'Short or Long Form' you and I will know even more about yourself. It is absolutely amazing how generally 'Unfit' we North Americans are or have become at our own volition. A sad state of affairs considering one can keep reasonably 'FIT' with about twenty minutes a day engaging in 'Smart Fitness Exercises' which involve 'Stretching and Strengthening'. It makes you feel better a little bit at a time. Your personal 'Well-Being' will be enhanced both 'Mentally and Physically'. It's worth the TRIP!

Our 'Cardio-Vascular' well being will determine whether we live an

additional five to ten years. We best think about this option now, as when we are having a negative physical event (Myocardial Infarct or stroke) the concept of 'Just a little more time' will definitely flash across our mental screen. At that time the options may have expired. There is no time like the present. Do It Now! The process of getting more fit is not drudgery, but relaxing and rewarding. It's up to you. A suggestion is, if you do not like getting exercise alone, find a practising friend to lead the way.

9) **ARM LENGTH : LEG LENGTH RATIO:**

Just before we get to the actual 'Fitting Chart', let me mention again what this 'Arm Length : Leg Length Ratio' is and how it is measured (item #12 below). When we grow our arms and legs lengthen and strengthen in direct relation to each other. If we have very long Legs and short Arms, we will simply need longer Clubs. So a primary measurement we 'Club-Fitters' must make is related to this 'Ratio' and we perform it simply by measuring the distance of your Hands to the Floor.

We can measure the distance with more than one 'Ruler or Rule Device' and from different 'Hand Points'. Whatever your choice of 'Ruler or Length Stick' you must convert this data to the correct 'Shaft Length'. There are three 'Hand Points' which are acceptable; 1) Finger Tips to Floor, 2) Second Index Finger Knuckle to Floor and 3) Wrist to Floor.

I happen to 'FEEL' that the 'Effective End of my Physical Lever' (Target or Brace) is the 'Index Trigger Finger', so I measure from there. Where you measure from depends on the 'Ruler and Conversion' so make sure you are not using a 'Wrist Ruler' and doing so from 'Finger Tips to Floor'.

Now to this 'Custom Fitting Chart'.

PERSONALIZED CLUB-FITTING CHART

Technician _____

Date _____

NAME:

Date Of Birth:

Street:

City:

Postal Code:

Telephone: Home:

Work:

E-Mail:

Home Course:

General Health:

Prior Injuries:

1) Height: 2) Weight:

3) Range Of Motion: 4) Flexibility:

5) Hand/Glove Size: 6) Ham to Finger Ratio:

7) **GRIP** Size: 8) Composition:

9) Special Under-listing/Wrapping:

10) Finger Tips To Floor: 11) Knuckles To Floor:

12) Arm Length / Leg Length Ration:

13) **SHAFT LENGTH:** MSS $\frac{1}{2}$ " Under $\frac{3}{4}$ " Under 1" Under Other
 MGS 1" Under Other
 LSS 1" Under Other
 LGS 1" Under Other

14) **FLEX/RESISTENCE:**

Frequency: L4(20) L3(25) L2(30) L1(35) L(40)
 A(45) R1(50) R2(55) F(60)
 S(65) XS(70) XXS(75) H(80+)

15) Special **TIP TRIM** Instructions: +1/2" +3/4" +1"

Standard

-1/2" -3/4" -1"

16) Shaft Composition: Steel Graphite Other

17) **SWING WEIGHT:** D.0 D.1 D.2 D.3 D.4 D.5 Other
 C.4 C.5 C.6 C.7 C.8 C.9 Other

18) **HEAD** Style: WOODS Stock # _____

IRONS Stock # _____

19) **LOFT:** Standard

Strong 1degree 2degrees 3degrees

Weak 1degree 2degrees 3degrees

20) **LIE:** Upright 1degree 2degrees 3degrees Other
 Flat 1degree 2degrees 3degrees Other

21) Iron Head Covers Wood Head Covers

22) **P.S.B.** Yes No

Q22)

GOLF

"An expensive way of playing marbles."

G.K. Chesterton

Q23)

"I told him he was a year away from the Tour
and next year he'll be two years away!"

Chi Chi Rodriguez

(upon evaluating an amateur's potential)

CARE FOR YOUR CLUBS

(These are your tools for 'Birdies', 'Eagles' and
the occasional 'Bogie'.....most importantly great fun!)

LOOK AFTER YOUR TOOLS and THEY WILL LOOK AFTER YOU!

- 1) Never put your clubs away wet. Store them in a dry place.
Remove wet or damp head covers, towels, mud or grass.
- 2) Never throw or force your clubs into your bag.
It damages the heads, shafts, grips and does
nothing positive, mentally or physically.
- 3) Use wood head covers, long-neck for graphite-shafted clubs.
Ask an I.R.G.O Team Member about our Castle Bay iron
covers, a very smart investment for two reasons. ASK US!
- 4) After every game wash your clubs in warm dish soap and
water; first the grips and then the heads. Use a strong
bristled brush. Why the grips? It takes the hand oils and
dirt off, giving you better traction and more life.
- 5) Clean your clubhead grooves with a new sharp tee, small nail
or a strong tooth-pick. Grooves directly affect ball action.
- 6) Graphite-shafts require 'graphite-friendly' bags and a
little more general care and respect. Not as tough as steel!
- 7) Re-Grip about once a year if you play 2 or 3 times a week. If
you care for your grips they will last much longer.
- 8) Have your clubs safety and 'FIT' checked free by an
I.R.G.O. or other qualified professional to ensure your
best advantage in using them.

Free 'Winterization' anytime.

BETTER CLUBS HIT BETTER SHOTS!

We Care About Our Customers

CLEAN YOUR CLUBS & SHINE YOUR PUTTER

'Looking Good Makes You Feel Good'

Looking good says, 'I care. I'm meticulous. I'm proud. I'll take the time I need to do what I have to do.'

'Looking Good' is speaking first to yourself and then to your opponent. Make sure that you dress and carry yourself so **YOU THINK** that you look good. Starting to care is a first step towards victory.

'Clean Your Clubs & Shine Your Putter'. Now you are talking to your opponent and the golf course and telling BOTH of them that you are in charge; that you have all of the details under control and that you are ready to take care of business.

You preparation and appearance puts people '**On Notice**' that you are 'Open For Business' and you will, importantly, look the part and at least appear to be '**Zoned For IT**'.

Each seemingly 'Little Step in the Journey of Golf' is of importance, so make them with care and deliberate 'Confidence'.

Then freely, 'Let Your Work Speak For Itself'.

I thank the late Senor Francisco Lopez for this inspiration and wise guidance. You will find much more of this sensible tutelage in 'The Golf Teachings of the Late Senor Francisco Lopez, Volume I and II' written by Jonathan Fine and published by Stand Tall International Inc. located at Suite #300, 3100 Steeles Avenue West, Vaughan, Ontario, CANADA, L4K 3R1 and can contact them by telephone at (905) 760-1800 or toll free at (888) finedeo and by toll free FAX at (888) condo55. This writer strongly recommends your reading these two enjoyable works of some substance. A wise investment of a little time and a little money.

Q24)

COST

"Your financial cost of playing golf can be best figured out when you realize if you were to devote the same time and energy to business instead of golf, you would be a millionaire in approximately six weeks."

Buddy Hackett

Q25)

REVERENCE

"Prayer never seems to work for me on the golf course. I think it has something to do with my being a terrible putter."

The Reverend Billy Graham

Q26)

TEMPERANCE

"I never pray on the golf course. Actually, the Lord answers my prayers everywhere except on the golf course."

The Reverend Billy Graham

C18]

5 5 5 GOLF
Personalized Golf Instruction
('Satisfaction Guaranteed')

B-3

B A S I C (4 Hour Programme)

#1 B3 - Swing Fundamentals (5 PGSBA X 5 SHEBP)

Time: 1 hour (1 x 1 Hr session)
Program: Indoor: Basics, Written Curriculum.
AIRLINE FORMAT...Brief - Teach - Debrief

#2 B2 - Ball Flight (always 5 X 5)

Time: 1 hours (1 x 1 Hr session)
Program: Driving Range: Basic Impact Control.

#3 B1 - Pitching, Chipping & Putting (always 5 X 5)

Time: 2 hours (2 x 1 hour sessions)
Program: Driving Range: Basic Skills.

A D V A N C E D (4 Hour Programme)

#4 A2 - Advanced Ball Flight & Specialty Shots (5 X 5)

Time: 2 hours (1 x 2 hour session)
Program: Golf course and driving range instruction
for the advanced golfer.

#5 A1 - Advanced Pitching, Chipping, Putting (5 x 5)
Course Management

Time: 2 hours (1 x 2 hour session)

Program: Equipment, Course Management, Game Strategy,
Practice Strategy, Psychology, Career Management.

THE 555 GOLF ACADEMY

****Proficiency Diplomas issued upon successful completion
of each separate phase in the above progression****

Q27)

"Some players would complain if they had to play
on Dolly Parton's bedspread!"

Jimmy Demaret

Q28)

PROFANITY

"Golf is a game of **Expletives NOT Deleted.**"

Dr. Irving A. Gladstone

Q29)

"If profanity had any influence on ball flight,
the game would be played far better than it is."

Horace G. Hutchinson
(golf historian)

RULE #22:

The 'PEDESTAL' Rule

FOR THE CLUBS IN THE MIDDLE OF YOUR BAG (#4/5/6 cluster)
YOUR FEET SHOULD BE GENERALLY UNDER YOUR ARMPITS.

FOR LONGER CLUBS THEY SHOULD BE SLIGHTLY WIDER
(but not more than just outside your Shoulders)

and for

SHORTER CLUBS SLIGHTLY NARROWER THAN UNDER YOUR ARMPITS.
(just under your Rib Cage)

(LONGER - WIDER)
(SHORTER - NARROWER)

I guess we should always 'Keep It Stupid Simple' right? So we start with the very short clubs with our 'Feet' about under the 'Rib Cage' and then as the clubs get longer, so too does your 'STANCE' get wider, in about one inch increments until you get to your 'Driver' which you already know utilizes a 'STANCE WIDTH' that is just under or slightly outside your 'Shoulder Sockets'. Be careful that you do not get wider as your ability to 'PIVOT or ROTATE' will deteriorate '**Exponentially**'; serious stuff this 'STANCE and ALIGNMENT'!

It is a companion to this Rule that your 'BALL PLACEMENT' is safe when it is under the 'Central Target Clavicle' for clubs in the 'Middle of Your Bag'; One ball forward of the 'Set Point' for 'Long Irons' and one ball aft for 'Short Irons'.

Read on to hear about the 'Teed Up Ball' and not the 'Teed Off Player'.

A LITTLE RELIEF

1)A kindly, grandfatherly, but curious gentleman is strolling past a mental institution when he hears a strange voice moaning "13, 13, 13, 13" in an Australian accent.

This fellow turns towards the sound to investigate in a slow paining gaze. He sees only a smallish hole in the old, discoloured stucco wall just above a cluster of daffodils. So he walks over to the hole, bends over and peers in, promptly getting a 'Poke In The Eye'.

The moaning tone continued, "14, 14, 14, 14!"

2)Eager to make full use of my new up-graded computer's capabilities, I asked a customer service representative at my bank if they offered 'On Line Banking'.

"Certainly", she replied rather matter-of-factly, pointing to a crowd of people near the teller window. "The line start over there!"

3)Everyone keeps saying that women are smarter than men, but did you ever see a man wearing a shirt buttoned down the back?

4)A foreign national was walking about in a British Country Village and confronted a local.

"What's the quickest way to York?" he asked.

The tweed-kilted local scratched his head and turned his head to gaze down the lane. "Are you walking or driving?" he asked.

"Driving".

With a twinkle in his glassy eyes, he torted, "That's the quickest way!"

5)A country farmer reported to the local sheriff that the traffic along the road beside his farm were driving far too fast and had killed several of his free-range chickens and geese. The sheriff's deputy suggested they put up a sign reading 'SLOW - SCHOOL CROSSING'. So he did.

Three days passed and the farmer returned reporting that the sign had no affect. The deputy sheriff pondered momentarily, then suggested a sign change to 'CHILDREN AT PLAY'. So he did so.

Four days later, on Saturday, the sheriff's deputy was curious that he had not heard from the gentleman farmer, so he picked up the phone and called. Enquiring, the farmer said that sign had little effect, "So I changed it to 'NUDIST COLONY' and now every car passes slowly".

6)Electricity originates inside clouds. There it forms into lightning which is attracted to Earth by 'Golfers'. After it enters the ground, the charge hardens plant matter into coal which, when strip-mined by thoughtless over-charging power companies and burned in big ovens called 'generators' turns back into electricity which they sell back to us. (free from Mother Nature and expensive to us). We connect it to our TV's so we can watch 'The Golf Channel', drink too much beer and 'make water' which is returned to the ground by the big old oak tree in the back yard, evaporates into water-vapour leaving behind the 'urea nitrates' to make the grass green for golfers. The water vapour returns to the clouds where it is available to make lightning, and so on. This is called a 'Cycle' which is very much like a 'Round of Golf' which gets its name from good folks going 'Round and Round and Round and' ...

7)The answer to one of life's greatest mysteries! It is called the 'Buffalo Theory'.

"Well, ya see Maitee, it's like this... A herd of buffalo can only move as fast as the slowest buffalo. When the herd is hunted, it is the slowest and weakest ones at the back that are killed first. This natural selection is good for the herd as a whole, because the general speed and health of the whole group keeps improving by the regular killing of the weakest members.

"In much the same way, the human brain can only operate as fast as the lowest functioning brain cells. Excessive intake of alcohol, as we all know, kills brain cells, but naturally it attacks the cells with the lowest metabolism or frequency first. In this way, regular consumption of beer eliminates the weakest brain cells, making the brain a faster and more efficient machine. That's why you always feel far smarter after a few beers!

8)A couple were being interviewed on their 'Golden Wedding Anniversary'. "In all the time, did you ever consider a divorce?"

"Oh no, not divorce, we're too old-fashioned for that", one said.
"Murder several times, but not divorce!"

9)The height of ambition is a flea running up an elephant's rear-end with the intentions of rape!

10)"How is your golf game, dear?" asked Jack's wife Tracy.

"Well, I was hitting it pretty well, but my eyesight's gotten so bad, I couldn't see where the ball went".

"You're seventy five years old, Lovey!" admonished his wife.
"Why don't you take my brother Scott along?"

"But he's eighty-five and doesn't play golf any more," protested Jack.

"Yes, but he's got perfect eyesight and can watch your ball for you," Tracy pointed out.

The next day Jack teed off with Scott looking on as his observer. Jack swung and the ball disappeared down the middle of the fairway, out of his sight. "Did you see where it went Scottie?" he asked.

"Yup, I did," Scott answered.

"Well, where is it?" yelled Jack while squinting and with furrowed brow, eyes peering off into the distance.

"I forgot!"

11) He hoped and 'Prayed' that there wasn't an afterlife. Then he realized there was a blatant contradiction involved here and then merely 'Hoped' that there wasn't an afterlife!

Douglas Adams

12) I want to know what good is a 'Web Search Engine' that returns 324,000 'MATCHES' to my 'Key Word'? That is like saying, 'Good News'! We've located the product you're looking for. It's on Earth!

Bruce Cameron

13) "Gravity cannot be held responsible for two people 'Falling In Love'."

Albert Einstein

14) "What insight could you possibly hope to gain from a man whose I.Q. wouldn't make a respectable earth quake?"

Shelley Long

STUPID QUOTE

15) "Low earnings seems to be the key reason why someone who usually works full time is a member of a poor family."

A direct quote from
The U.S. Bureau of Labor Standards
'Study and Report on Poverty in America'

(Seems to be some 'Intellectual Poverty' in the ranks of civil servants and bureaucracy as well)

16) 'No, I didn't actually build it,' said the beaver to the rabbit as they stared up at the immense bulk of the Hoover Dam, "but it's based on an idea of mine!"

(Keeping thinking and dreaming and you too will have good ideas.

**'Thoughts Determine What You Want.
Actions Determine What You Get!'**

Go ahead, Build The Dam Thing! Hit the Shot ... Dead Stick!

17)A Russian man is walking through a bazaar, when a stranger comes up to him and offers to sell him some illegal Viagra for 100 rubles.

"No! Not worth it!"

"OK, how about 50 rubles?"

"No! Not worth it!"

"OK. 20?"

"No! Not worth it!"

"How about 10?"

"No! Not worth it!"

"Listen, these pills cost \$10.00 American each. How can you say they are not worth it?"

"Oh, the pills are worth 100 rubles, but my wife is not worth it!"

18)MacDermot and McDuff were sitting in the clubhouse on a raw, blustery day, thawing their beards in front of the fireplace while freezing rain beat against the windows.

The pair were silent for a long time over their whiskeys.

Finally MacDermot spoke, "That was quite a round of Golf!"

"Aye," McDuff replied.

"Same time next Saturday?"

"Aye", said McDuff, 'Weather permitting!"

19) A DC-10 had an exceedingly long roll-out after landing because his approach speed (V Ref) was far too high.

San Jose Tower: "American 751 Heavy, Turn Right at the end, if able. If unable, take the Guadalupe exit off of Highway 101 and make a right at the light to return to the airport!"

20) When a man says he approves of something in principle, it means he hasn't the slightest intention of carrying it out in practise!

Otto von Bismark

POSTED ON THE GOLF CLUB LOCKER WALL

- 21) 1) Back Straight. Knees Bent. Feet Shoulder Width Apart.
- 2) Form A Loose Grip.
- 3) Keep Your Head Down.
- 4) Avoid A Quick Back Swing.
- 5) Stay Out Of The Water.
- 6) Try Not To Hit Anyone.
- 7) If You Are Taking Too Long, Please Let Others Go Ahead Of You or 'Play Through' as it is called.
- 8) Don't Stand Directly In Front Of Or Behind Others.
- 9) Quiet Please ... while others are preparing to go!
- 10) Don't Take Extra Strokes.

Very Good! Well Done!

Now flush the urinal!

Go Outside and Tee Off!

22) "Why shouldn't truth be stranger than fiction? Fiction, after all, has to make sense! (Mark Twain)

23) A very direct student was in his college book store. Questioning the clerk about the value of a specific book for one of his major classes, the clerk responded, "This book will do half the work for you!"

"Good!", replied the quizzical student, "I'll take two of them!"

24) It was a sunny Saturday morning, and Murray was beginning his 'Pre-Shot Routine', visualizing his upcoming shot when a voice came over the clubhouse loudspeaker, "Would the gentleman on the ladies tee please back up to the men's tee?"

Murray was still deep in his 'Routine', seemingly impervious to the interruption.

Again the announcement boomed over the landscape. "Would the MAN on the LADIES tee kindly back up to the men's tees?"

Murray now noticed and had quickly had enough of the intrusion. He turned towards the pro-shop and shouted commandingly, "Would the inconsiderate loud mouth in the clubhouse kindly 'Shut Up' and let me take my second shot?"

25) Show me a man with 'Both Feet On The Ground' and I will show you a man who cannot put on his own pants!

26) An 'Octogenarian' who was an avid golfer moved to a new town and joined the local 'Golf & Country Club'. He went to the club for the first time to play. He wants to accompany a seasoned course veteran to learn the ropes but was told there wasn't anybody he could join as everyone was already on the course.

He repeatedly sought a playing partner without any success.

Finally the Assistant Pro said he would play with him and would give him a 12 stroke handicap. The 80 year old said, "I really

don't need a handicap as I have been playing quite well. The only real problem I have is getting out of sand traps."

They departed and he was capable of playing well.

Coming up to the 18th the old fellow made a nice long drive but it landed in one of the sand traps that guarded the hole. Shooting from the sand trap he struck a very high ball which landed very softly on the green and rolled directly into the cup.

The Assistant Pro walked over to the edge of the sand trap where his opponent was still standing. He said, "Nice Shot, but I thought you said you have trouble getting out of sand traps!"

Replied the Octogenarian rather pointedly, "I do! Young Man, please give me a hand!".

- 27) 'Sometimes when we cry no one sees our tears.
'Sometimes when we are troubled no one sees our pain.
'Sometimes when we are happy no one sees our smiles.
'Sometimes when we need a hand no one reaches out.

'But just pass gas loudly (fart) one time!'

(Truth and Simplicity at its most basic level)

- 28) Sign over gynaecologist's office door:

"Dr. Jones, At Your Cervix"

- 29) Over the entrance door of a plastic surgeon's office:

"Let Us Help Pick Your Nose"

30) Here is one for Canadians and those amused by the few of us with a certain sense of humour!

Recently a group of elementary school students were asked to take various 'International Names Of Countries' and break down their linguistic origin. 'AMERICA' was reported as having its beginning in the name of 'Amerigo Vespucci' an early Portuguese sea faring explorer. Then a very pretty little Mexican lady undertook to explain the root of the name '**CANADA**'. She explained her research methods very maturely. "Well, I looked up things in my dictionary. I know that '**ACA**' means '**Here**' in English. Then I located '**NADA**' which you know means '**Nothing**'. When I put the two words together, ACA+NADA I discovered the way 'CANADA' was named!"

(Bite your tongue!)

Q84)

"Two roads diverged in a wood and
I took the one less travelled by
and that has made all the difference."

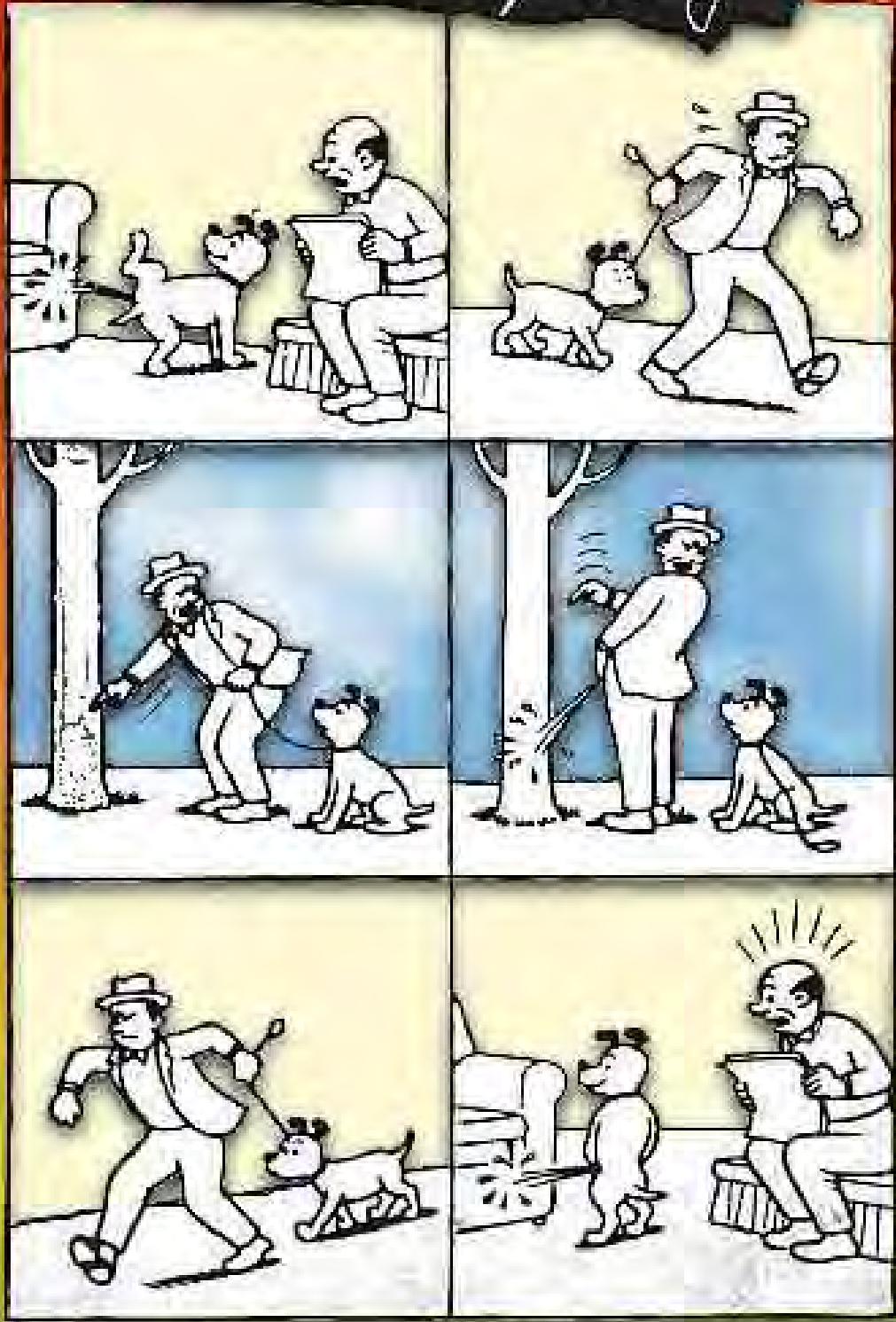
Robert Frost

Sometimes following the flock or well-worn path may be safe but not always the most venturesome and fruitful. Be of good courage and strong will for there is certain newness out there just beyond our eye-sight and ear-shot but not beyond our vision and intuition. Honed by experience, trust your delicate senses for they are seldom far wrong!

Best of luck in your personal 'Journey' !

... always

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Karl is a 40 year dedicated veteran who has come up through the golf trenches. Having provided in excess of 100,000 golf lessons, before long ago stopping count, Dr. Fischer continues helping good people improve and have more fun on a daily basis.

He says, "We can make smart changes in clients' swings very much faster than they expect. Our proven system involves less cost and reduced frustration. Quicker smiles are a good thing!"

It is estimated that the number of 'Junior Lessons' during Karl's career, years ago, totaled in excess of 30,000. Every year Fischer organized golf clinics for bright-eyed youngsters helping them to better understand the 'Golf Swing' and thus have more 'FUN'.

Seventy to eighty students per day, four days a week for ten to twelve weeks every summer adds up. His personal client list numbers well in excess of 10,000 students, a third of whom are still on his mailing list and contact him regularly for advice!

He says, "This battle tested and proven '555 Golf System' quickly prevents or fixes negative playing issues ... permanently! We do not rebuild our patients. It is more prudent to simply modify rather than doing major surgery! Smart little steps we take are very predictable with certain outcome!"