

SWING THOUGHTS

– How do they work?



Anyone who golfs - especially anyone just learning the game - has had moments standing over the golf ball when it seemed that there were an overwhelming number of things to think about, and it made the task at hand seem nearly impossible. The golf swing, from the time the club starts back until the follow-through is completed takes only about one and a half seconds. But anyone who plays has on occasion watched painfully as some player stands over the ball for what seems like a very long time before starting their swing. And one suspects that that time is spent going over a mental check-list of all the things he or she both wants to do and wants to avoid doing during the upcoming swing. That is, unlike a lot of sports, golf is not reactive - where what you do depends on a quick reaction to a situation that suddenly arises, like an approaching curveball or a tennis ball hit to a corner, or something. The ball is stationary - and the golfer's task is to advance it toward the hole. And his or her concern is how to do that as well as possible - with some sort of positive outcome (getting the golf ball into the fairway or out of the bunker or close to the pin, for instance, or maybe just into a position to play the next shot with some hope of success).

So how does it work? What swing thoughts - or swing "feels" as some say - can actually contribute to a positive outcome on an upcoming golf shot? I suspect that for many golfers, the thoughts are about what not to do - don't lift the head or don't swing too fast or don't hit the ground behind the ball or something. But what *should* be thought about - and committed to - is what can be focused on that can contribute to hitting the desired shot. That is, what is actually in one's control? And the goal, I think, is to reduce the number of things to think about to just one - or *at most* two. Now it may be that there are a number of things to think about prior to addressing the ball - what kind of shot to play, what club to use, where to aim, what stance to take, where in the stance to place the ball, what grip pressure to have, etc. All of those pre-shot thoughts set up what you are trying to do with the swing itself. But once over the ball, the fewer thoughts you are trying to process, the more likely you are to successfully execute the shot. And after the half a millisecond or so the club is actually in contact with the golf ball, you as a golfer no longer have control over what it does. So what can you commit to that could have a positive effect on the result? That is what we try to master - and that is why we practice.

Practice - and muscle memory

First, let's be clear, muscles do not have memory. What we create with repetitive actions is motor function memory - the neural connections that tell your muscles what to do. This *procedural memory* is why you can tie your shoes without thinking about it. You have been able to do that most of your life, but not all of it. You weren't born knowing how - and it was probably bewildering before you finally got it right (much like the golf swing). But when you did successfully tie your shoe that first time - how many times did you then untie it and tie it again? I'll bet a lot. Why? Because that is the way you build procedural memory. The repetition creates and strengthens the neural connections that will let you do it the next time without all the trial and error. That is what we are trying to develop when we practice at the range. The difference is that it is difficult to "get it right" and then repeat exactly the same swing with so many moving parts involving so many muscles, joints, and limbs. There is not a very big margin for error in the golf swing. But there also is not just one golf swing - but essentially as many swings as there are golfers, and each golfer has a variety of moves - some more successful than others. So that is the complexity of the task. It's harder than learning to tie your shoes - which you mastered at a very early age (and yet to this day cannot tell another person how to do it). We often hear the expression that practice makes perfect. What practice actually does is make permanent. So we need to practice efficiently and with purpose to reinforce that motor function memory - and create the feel that goes along with making good shots.

Visualization - and motor imagery

We develop procedural memory by performing repetitive tasks. But we can also build some of those same neural connections by visualization - by thinking about what we are trying to do and how we will do it. It's called *motor imagery*. Watch a gymnast before beginning her routine sometime - she is mentally going through every single move she intends to make in her routine. The neural processing associated with that mental "rehearsal" strengthens the neural connections and improves the probability of being able to perform the same tasks. Watch Jason Day visualize what he wants the golf ball to do prior to some shot - or Jordan Spieth picture the path a putt will need to take once he strikes it. All of that promotes the muscles being able to actually perform the tasks that are likely to cause the outcomes being visualized - all as a result of the many hours of repetitively practicing those same shots. Any of us, even though we are not premier athletes, can make use of the idea of promoting positive results by incorporating motor imagery. That is, we should visualize what we are trying to accomplish in a golf shot - and what we have control over in executing that shot - all prior to actually taking the shot.

My game

I grew up with golf - I played young through high school and college, and even played moderately well at times, but was never great. And after a long (over three decade) hiatus from the game when real life took over, I returned to it fifteen years or so ago. And I am now a much better old golfer - that is, compared with my peers - than I was as a young golfer as a college player. So how does that happen? (And in what other sport *can* it happen?) The glib response, of course, is "muscle memory". But, remember, muscles don't have memory. The real answer is that some of those neural connections were still there when I returned to golf - and then playing and practicing a lot over the last fifteen years has strengthened them. Is my swing the same as it was when I was twenty? Of course not - nor would I want it to be. I have changed, of course, and the equipment has changed as well - a lot. But I'm sure some of the fundamental elements of that swing are identical (and comparing some recent photos with those I have during my college playing days confirms that).

I play well enough that I know that during any particular round - even poor ones, I will hit some very good golf shots. But perfect golf is not possible, nor does good golf require perfection. It is a game of misses and recovery. And the goal is to reduce the number (and severity) of the mishits - that is, make the mishits be much more manageable - as well as improve the quality of the good shots. To that end, I have been aware that many of my poor shots can be attributed to just a few swing mistakes - poor tempo or poor sequence of movement - but it is not altogether clear how to avoid those mistakes during a round. Probably the most common of my mistakes is also among the more common that all golfers make. That is, if I get "too quick" in my swing - especially at the transition between backswing and downswing, there are several things that can happen which lead to poor shots. That quick transition ("jumping from the top", I often call it), can lead to a steeper attack angle and either a blocked shot, where my body is ahead of my arms, leaving my clubhead open, or it can lead to a low pull hook if I "feel it" during my downswing and try to catch up by over-rotating my hands as I go through the ball. I can usually sense what I've done - and could probably explain the mishit *after* the shot. But that doesn't help in avoiding the mishit. Another way to describe why those shots occur is just to say that my arms and body are not working together - that is, they are "out of sync". So how can I avoid those poor swings, how can I promote a smooth rotation with everything working together?

My sense is that when I hit my best shots, my swing is smooth with good tempo, my transition isn't rushed, and my acceleration down and through the ball is well coordinated between what my arms do and what the rest of my body does as I unwind toward the ball. And if I've done it right, I have released the clubhead through the ball, kept my head steady, and maintained my balance all the way to the follow through. But on my mishits, I often feel my head has moved forward, my arms and body are out-of-sync, and I'm not as balanced through to the finish of the swing. The key for me, I think, is the transition at the top of my backswing. So what do I have to think about *prior* to the shot to promote a smooth transition, keep my head steady, rotate through the ball with a good release, maintain my balance, and be able to hold the finish - all without thinking of each of those individual things. That is, what swing thought (or thoughts) would promote the smooth controlled motion I am looking for?

I know that on my "good" swings, I can see the blur of the clubhead as I release through the ball and I can hold a balanced finish - and the ball will go pretty straight. That is, the clubface was more-or-less square to the target line and swing path - which meant not much "side-spin" was imparted to the ball. ("Side-spin" is in quotation marks here because a sphere can only spin about one axis. The question is not whether there is side-

spin in addition to back-spin, but whether the axis of rotation after the ball leaves the clubface is horizontal or tilted. If horizontal, the ball goes straight. If tilted, either to the left or right, then the ball curves in that direction.) But the question is what do I have control over that can promote that, what do I need to pay attention to that promotes being able to see the blur of the clubhead as it swings through the ball along the target line, and that I can then maintain my balance to the finish?

My recent swing thought

And that leads to my most recent swing thought - and it was prompted by something Peter Jacobson has said about Jordan Spieth's golf swing (during his spectacular 30-under-par performance in the 2016 Tournament of Champions). Jacobson commented that Spieth controls the club on his backswing with his left arm - that it keeps the club "on-plane" from the takeaway to the top of the swing. But on the down- and through-swing, he controls the club with his right arm all the way through the ball to a full extension. (And I don't know if it is a conscious thought on his part.) That comment made me wonder what I do. I mean, maybe we all always do that and I'd never been aware of it or put words to it. But it seemed to me I've always started my arms downward by pulling the club toward the ball with my left arm and *then* releasing the club through the ball with the right. But I wasn't sure. Maybe on my good to very-good shots, it's all the same thing and it works because the timing is right and my arms and body are simply working properly together. But what about on those shots I'm less pleased with?

And I wondered if I did anything differently on my full swings than on short shots with wedges. And I wasn't sure about that either. Very often, for example, when planning how I want to play a short shot - say from twenty or thirty yards out - I take a few one-handed swings with just my right arm, just to set the tempo and get a feel for what the club will do as it releases through the ball. For me, it promotes a smooth swing and a release of the club toward the target and it allows me to visualize the shot. That sounds like I'm controlling the clubhead with my right arm - at least on those short wedge shots. But I wondered if that was also so on full shots.

So in my next couple of practice sessions, I concentrated on full shots with my wedges - controlling the backswing with my left arm and the through-swing with my right. It was easier and more natural than I expected. That is, that feel was not unfamiliar to me and I felt that my arms and body were working together. And my best contact was when I was fully conscious of that swing thought. So it was time to take that swing thought to my full swing - seven-irons, five-irons, hybrid, fairways, and driver - just to see. We all know, of course, that we are going to mishit shots. We all know that not every swing is identical. And we also all know that one swing thought is not going to guarantee that all elements of the swing are executed correctly. And, moreover, we also all know that the swing thought that works for me at any given time may not work for someone else or even for me some other time. And controlling the release through the ball with the right arm does not mean the take-away or the swing path or the tempo was also good. But would that swing thought help control the swing through the hitting area?

So here is what this particular swing thought seems to do for me. If I begin with a smooth rotation on my backswing allowing my left arm to control the club as my shoulders rotate away from the ball, I feel that I can then rotate back through the ball with my right arm being the dominant control, release down the line with my right side, and maintain my balance all the way to the finish on my follow-through. I seem to be less likely to make a quick transition by pulling down on the handle with my left arm - hence my arms and body seem to rotate together more consistently as well as making it less likely that my head moves forward. And it also seems to take away any manipulation in order to have a full release - as that has already been "programmed" into the swing. Does that mean I'll never have mishits? Of course not. But hopefully that thought about how to control and then release the club will reduce the number - and perhaps the severity - of those mishits.

So how do I build the "muscle memory" required to repeat this? It seems to me that visualizing this motion - creating the motor imagery - will reinforce those neural connections. I then just need to commit to that every time - when I practice as well as when I play - to build the procedural memory and make that move "mine". Can I do that? And will it always work? And can I take this swing thought to the course and be successful with it? When I'm playing well, it seems to. But will that continue - and will that swing thought also work on those days when my tempo is off? We will see.

