Hole Notes
The Official Publication of the MGCSA

A Golf Memory: Can We Design it?
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A Unique Sport
The game of golf is extremely unique in how the sport’s participants relate to the landscape. First, golfers intensely focus on every bit of their environment, down to the direction the grain of the grass is growing and nearly imperceptible slopes on putting greens. We assess wind direction, location of hazards, vegetation edges, aiming points, topographical elevation, and the feel of the turf, soil, and slope under our feet. We also rely heavily on our senses in assessing our environment’s potential impact on our golf shot. How far is that bunker? What kind of elevation are we navigating, can we feel slope under our feet? Is there a water hazard to carry? What is our strategy? Is there a cool breeze, and if so, what direction is it blowing? Is it raining? Dry? Or is it hot and humid? In addition to sensing our environment, we call on our emotions to tell us how we feel about our golf shot... does it intimidate us or exhilarate us? Does it make us nervous, tense, or call us up to the challenge? Do we ask ourselves if we can make the shot? Or do we feel confident that we can? Our sensory system and the emotional center in our brain process all of this information and the memories of our day start to form. But what makes some memories stick and others just fade away? I propose it is a combination of four factors that I think can be influenced by design that I call the “Biggest Bang Theory.”

The Biggest Bang Theory
It is my theory that the combined integration of 1) sensory inputs, 2) spatial awareness, 3) intense focus or captivation of attention, and 4) emotional response create the strongest golf memories. I propose that golf course architects can enhance and trigger these mental processes to create a golf memory through physical design techniques. I further propose that drawing on all four mental processes in a coherent way can create stronger golf memories than just drawing on one or two, and the design techniques that specifically target focus and emotional response in the golfer influence the strength of the memory most of all.

An experience that impacts all four mental processes at once has the greatest potential to create a near photographic image in our mind of the event. This is what I call the “Biggest Bang Theory.” Golf is uniquely predisposed to producing moments where all four
mental processes are engaged and integrated. The beauty of expansive vistas, the routing of the golf course, camaraderie with friends, and emotions conjured by hazards, victories, and defeats provide much fodder for emotional processing.

When making strategic choices, golf is really just a game with risk or reward, and win or lose outcomes. But the emotion associated with these outcomes is processed in the same primitive part of the brain (the Limbic System) that saw choices lead to life or death outcomes in competition for survival. Therefore, I think emotional competition makes golf memories even more memorable. Vivid colors, weather conditions, fragrant smells, and sounds of nature or laughter contribute sensory input. But whether competing for our own personal best score or going for a tournament win, it is the intense focus required to play the game and the associated emotional feelings that influence the strength of the golf memory.

Spatial Awareness
Golf is a sport that inherently requires close attention to our natural environment. We are more in tune to our spatial surroundings on the golf course than in most any other location. We know generally how far our drive went and how far we have yet to go to reach our target – sometimes down to inches. We are acutely aware of our elevation relative to our surroundings. Is the ball above our feet or below or are we hitting off an uphill lie or a downhill one? Will we have to club up to hit that elevated green or club down to account of a drop in elevation? And we have to be fully aware of our body movements relative to our spatial surroundings. In fact, we follow a predetermined routing of our movement through the landscape, and at any given time, we know where the next hole is and what number it is in sequence. So the spatial awareness required for memorable moments is present, but what else is needed?

Heightened Focus, Sensation, and Emotion
Think back to one of your strongest golf memories. You will probably remember something unusual or special about the moment. Maybe it was an incredible expansive view of an amazing golf hole, a lighthouse focal point in the distance, the visual color contrast between the fairway and rough, the sky and earth, or azaleas in bloom. You might remember the sound of the wind or smell of the sea, or the sound of friends laughing. You might remember the weather, the feel of salt or rain or sun on your skin, or the exhilaration of an imposing golf challenge that you faced – and whether or not you were triumphant. Or maybe it was a special place that produced an emotional response.

If you’ve ever played the Old Course at St. Andrews, you will likely never forget standing on the first tee looking out over the sacred golfing grounds, preparing to hit your first drive. Or standing on the eighteenth tee choosing a St. Andrew’s landmark at which to aim your final drive. The sensations and emotions that are perceived and felt when playing certain golf holes
The memory of your day at the golf course was created by the strategic choices you made, the emotions you experienced, the paths you walked, and the things that you saw, heard, smelled, and felt.

– Kari Haug, Golf Course Architect

27 Design Techniques to Create and Enhance Memorability of your Golf Course

I have divided the design techniques up amongst the four processes that aid in committing an event or place to memory, but that doesn’t mean they are exclusive to that process, only that each technique has a higher potential to impact the memory process in the assigned category.

Category 1: Design Techniques to Affect Emotion

**Most Important: Design Imposing Yet Surmountable Hazards.** Hazards are the essence of the game! They set up challenges that stir the competitive spirit and all the emotions that go with victory and defeat. When hazards appear to be especially imposing, like the ocean carry on the 16th hole at Cypress Point, or closer to home in Minnesota, architect Jeffrey Brauer’s 7th hole on the Quarry Course or the 17th on the Legends at Giants Ridge in Biwabik, MN, the golfer has to confront their fear of failure and find the confidence to stand up to the challenge.

The Quarry – Hole 7  
The Legends – Hole 17

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*Capitalize on Expansive Vistas.* The photo below on the left of the 5th Hole at New South Wales, designed by Alister MacKenzie in Australia, is a great example of capitalization on an expansive vista. Some may say that it is easy to take advantage of views like this; however, the architect must know how to route the course to deliver this view and the golf strategy associated with it. The photo below on the right is the finishing hole at Kingsbarns Golf Links in Scotland. It was designed by Kyle Phillips and Mark Parsinnen and has a similar effect of stirring awe and wonder in the human spirit. The expansive view of the 18th green from the clubhouse (see the shadow) has an additional hook that draws upon our psyche. During construction, a centuries old bridge and water conduit was unearthed. Called “The Brig over the Cundie,” the Phillips and Parsinnen team artfully incorporated this discovery into their design.

The story behind the bridge has built an extra level of memorability into their masterpiece. More will be discussed about the significant role that history, story telling, and naming of golf holes and features has in creating memorable golf moments.

Views from a point of prospect draw up a sense of awe and wonder that sometimes borders on fear – this is called the sublime. Famous landscape artists in

*New South Wales Golf Course, Australia*

*Kingsbarns Golf Links, Scotland*
the late 1800’s knew this and used expansive views with vanishing points in the distant horizon to instill a sense of the unknown, conjuring the exploratory spirit of art enthusiasts. If the original routing of a golf course doesn’t capitalize on an expansive view, sometimes a re-routing can. In other situations, it may simply be that views have become overgrown by trees and a little work with a chainsaw is in order.

**Create Surprises.** Seth Raynor was a near magician at creating surprises. His Midland Hills CC design in St. Paul has a punch bowl green and a modified Biarritz green, both green types that can lead to surprising moments. The element of surprise with the punch bowl green is usually pleasant with the green coralling the golf ball. This creates an emotional feel-good moment. I’ll never forget the time I thought I was a mile from the flagstick at Dunbar GC in Scotland only to find my ball only feet from the hole at the bottom of a punch bowl green!

As a golf course architect, I think it is desirable to design positive surprises to keep the game fun and enjoyable. The total blind hazard is no fun and in my opinion should be avoided. The only memory it might create would probably be a bad one. The Biarritz green creates a fun disappearing/reappearing act as the rolling golf ball vanishes into a dip only to re-appear on a back plateau of the green. The effect of this shot first plunges the spirit as the ball disappears, and then immediately elevates the spirit when the ball re-appears. One of the most memorable examples of the Biarritz green is the 16th at North Berwick, although this exaggerated Biarritz also has its share of quirk and challenge, which makes it extra memorable.

**Create Mystery.** Mystery leads to discovery and surprises. The mystery doesn’t always have to be part of the golf hole proper; it can be on pathways between holes. Both examples pictured here are from Kingsbarns Golf Links in Scotland.

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**The Peek-a-boo.** The Dell Hole at Lahinch in Ireland is a great example of hiding a portion of a target and creating the mystery that subliminally creates an emotional fear of the unknown. In golf, the *peek-a-boo* can push emotions related to curiosity, exploration and the unknown.

**Design Strategic Options that Require Decision-making.** Beth Page Black in New York has a host of great strategically placed bunkers. Here in Minnesota, Richard Mandell’s 2nd hole at recently renovated Keller Golf Course in St. Paul has a deep center bunker that requires a strategic decision to be made off the tee. Imposing bunkers challenge the golfer and evoke an emotional response; therefore, I think it is critical that they have good visibility. Sinking them into a hillside improves visibility, and increases the visual drama.

![Keller Golf Course – Hole 2, St. Paul, MN](image)

**The Famous or Historical.** We can’t design this one, but when we experience golf on grounds that are culturally significant, emotions are often stirred. When I first hit a golf ball off the tee at the Old Course, I literally was swinging blind because at impact, I couldn’t see the ball at all! The key to capitalizing on this technique is to make sure golfers know the history and significance through good storytelling.

![The Berkshire – Red Course, Hole 11, United Kingdom](image)

**Design the Love-to-Hate Hole.** You might hate it, but you will remember it!

**Category 2: Design Techniques to Affect Sensory Systems**

*Use Contrasting Color.* Naturalized areas have been part of European golf course design for centuries. In America, we are seeing a revival of this practice due to drought and tightening maintenance budgets. I think this
is an amazing opportunity for golf course architects to draw vegetative boundaries designed to frame golf holes and set up strategic hitting angles. See the photo of Royal Berkshire Red on the previous page.

**Use Stunning Color Combinations.** Undoubtedly one of the most memorable displays of color in golf are the azaleas that grace Amen Corner at Augusta National, or alternately, the gorse in bloom at Royal Dornoch in Scotland. The crabapple trees behind the 13th green at Keller GC in St. Paul, MN fill with blooms in the spring. In addition to the crabapples, Keller has naturalized areas teeming with native wildflowers, bees, birds, and dragonflies; and numerous maples that blaze with color in the fall. Seasonal color should be a consideration when developing the planting palette.

![Image of Royal Dornoch, Scotland](image1)

**When Available, Use Moving Water.** Water is one of my favorite and most versatile elements in the design palette. It has the potential to stimulate multiple senses at once. If it is still and mirror-like, it reflects what is around it and can have striking visual appeal, but if it is moving, it can stimulate multiple senses. A fountain or waterfall can create a visual landmark, and water or mist can be felt. A babbling brook with check dams can stimulate auditory senses and provide memorable background sounds. If we are near the ocean, we will surely hear it and

![Image of Keller GC, St. Paul, MN – Hole 13 Forward Tees](image2)
may even smell it. In Minnesota, the Land of 10,000 Lakes, we have ample opportunity to create memorable golf strategies using meandering streams and by building ponds. Some of the most memorable water features in the state can be found at The Meadows at Mystic Lake designed by Garrett Gill and Paul Miller. The Meadows has it all, fountains, meandering streams, check dams, and ponds. Making the water extra special at The Meadows is the cultural value it holds for the Native American community for whom the course was designed. This special note was not lost in the design.

Specify Fragrant Vegetation. Smell is the most primitive of all senses, and along with spatial mapping (discussed in the following section,) it is the most closely related to memory. However, except for taste, the sense of smell is probably the most difficult sensation to illicit through design. The use of fragrant plants is in our design palette, but golf course owners should consider opportunities to create a great golf experience starting in the clubhouse. Maybe consider an espresso bar, a cigar case, or create your own traditional clubhouse treat like the Master’s pimento cheese sandwich.

**Category 3: Design Techniques to Affect Spatial Memory**

A spatial memory might best be thought of as a spatial map in our “mind’s eye” that we use to recall a certain place, like your childhood home, or the first tee at St. Andrews. Spatial awareness and memory is how we know where we are located relative to the rest of the world in order that we don’t feel lost. A spatial map is created in the mind’s eye by collecting sensory input from our surrounding environment and integrating it with proprioceptive and kinesthetic (body movement and location) information in the brain. A great routing of golf holes that uses design elements to affect the senses, assist with way finding, fixate attention, and conjure emotion can produce a very strong spatial map, which in turn can contribute to the creation of vivid golf memories.

Provide a Course Map. The sequential numbering of golf holes, their nature of being a series of pathways (fairways) and places (tees and greens,) and their arrangement in loops with a beginning and an end creates a very distinctive spatial map in the brain. An overall actual map of the golf course can reinforce the golfer’s own internal map. Stored in the “mind’s eye,” the spatial map is one of the most unforgettable forms of memory.

Use Unassuming Pathways Leading to Incredible Places. Since almost all golf courses are sequentially numbered loops, why are some golf courses more memorable than others? I think the answer is some golf course architects are more attentive to the entire route of the golf course including the movement between holes. Some are also more proficient at the use of landmarks, hazards, and focal points that compel the golfer to tune-in. Probably the most
An effective landmark for a golfer is one that not only is a stunning visual place, but also one that produces an emotional response, like a hazard. The demanding tee shot over the ocean and rocky cliffs on the 16th hole at Cypress Point comes to mind as one of the most memorable shots in golf. What better way to create an emotional response (and a lasting golf memory) than setting up the ultimate golf challenge over an awe inspiring hazard, on the 16th hole, with an expansive view over water, and the focal point green framed by bunkers? How about adding one of the most unforgettable walks in golf through a tunnel of ancient cypress trees, with the golfer emerging like an explosion onto one of the greatest stages in golf?

**Design a Great Routing.** A golf course where every hole looks much like the last hole may be memorable, but probably only for how mundane it was. In contrast, a golf course that is has a rich linkage of distinctly memorable golf holes such as North Berwick in Scotland, has the first building block to create a golf memory... a great routing. North Berwick’s simple out and back figure-of-eight routing is just one of it’s memorable features. The path is easy to remember as a natural way to navigate the shoreline, and all along the way are distinctive landmarks and quirky golf features that lay down memory after memory. (Read more about quirk later.)

Throughout the North Berwick routing, primitive human emotions related to motivation, awe, exploration, competition and conquest are called upon. We also experience emotion related to the excitement of the sport, strategic challenges faced, and social interactions (whether competitive or friendly.) Finally, the ever-changing beauty of North Berwick inundates the golfer’s sensory system with nature’s magnificent palette of sights, sounds, smells, and haptic sensations.

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Use Landmarks. North Berwick has numerous landmarks that make the round memorable. North Berwick Law (a huge rocky hill – see previous page) is a distant backdrop on Hole 10, and Bass Rock rises from the Firth of Forth (sea) in the distance behind Hole 14 green. Both landmarks capture attention as golfers take aim. Holy Hill is a stunning landmark that will awe visitors on 13 of the 18 holes at the 2017 U.S. Open venue, Erin Hills. These are examples of landmarks on the horizon, external to the golf course. But there can also be landmarks within the golf course that heighten the memorability of the golf hole. North Berwick has stone walls, the most famous of which is on the 13th Hole called “Pit.” At Baker National in the Three Rivers Park District, the red barn is an attractive landmark.

Leave Room for Special Nodes in the Design. Nodes are crossroads or stopping points in the landscape, and gateways are markers of spatial transition in the landscape. The golf course has natural stopping points on greens and tees. These could be considered mini-nodes whereas a halfway house like the famous Carnoustie tea hut could be considered a true node. For some golfers, it is a tradition to visit the tea hut for mid-round respite from “Carnasty” and to leave their bag tag behind with the others from around the world. While this memorable node came about organically, the architect can identify locations on his/her master plan where special
moments can be added into the golf experience. Nodes, gateways, greens and tees designed as “rooms” or “huts” within the golf landscape are all part of making the golf experience memorable.

Design Pathways and Gateways.
The photo to the right is from Kingsbarns Golf Links in Scotland and is a crossroads example of a node, a pathway, and a gateway. Separating space makes each area more distinct and memorable as it’s own space. One space ends and the next one starts.

Kingsbarns Golf Links in Scotland.

Allow for Discoveries. Sculptures in the landscape at the Meadows at Mystic Lake were an addition made by the Mdewakanton Sioux community, and tie in extremely well with the design technique of creating surprises and using a common thread to create a coherent design, the importance of which will be discussed in the next section. The moose sculpture is located on the hillside adjacent to the 18th tee. The final hole is also called “Moose.”

Category 4: Design Techniques to Captivate Attention and Increase Focus
We have already discussed how golf inherently requires intense focus, both on the game and on the landscape. This section explains design techniques that can enhance the golfer’s ability to focus and ways that the architect can capture the attention of golfers from the moment they arrive.

The concepts discussed in this category can assist a talented designer with developing a memorable destination landscape that is easy for marketing departments to brand. The essence of this category is that all memorable places are distinctly recognizable. They are coherent in design, with a unique and consistent character. They have their own memorable identity. I call them “a place with a face.”
Design A Place with a Face or Place Identity. Designing a golf memory is more than designing the ‘sense of place’ that is so often referred to in the landscape architecture world. To design a golf memory, the architect must design a place that will allow for an experience that is like no other, a place that is uniquely distinguishable as different from all other places – a place with a face and a distinct identity. As golf course architects, we do this by using the physical palette of the natural environment, but in order to enrich the design, we create a design style and a charisma that makes our work identifiable, and the course owner’s product unique.

Find a Common Thread. A common thread is the absolute requirement of a place with a face. The common thread creates the design coherency and consistency of character required to formulate the place identity. Without coherency, the design is fragmented and the so is the identity.

The character of a memorable golf course is as distinct and unique as a charismatic individual. What I mean by this is that a California oceanside course like Cypress Point is distinctly different from the Scottish links course, Kingsbarns; and Tobacco Road in North Carolina is distinctly different from Hazeltine in Minnesota. Designing a distinctly identifiable golf course requires the designer to use a common thread throughout the design, but it goes one step further to draw upon the cultural history, geography, natural environment, authentic essence and location of the property so that the design does not feel contrived.

If a common thread is the necessary design technique for the design to hang together, then distinction is the element that sets it apart from all others. Without it, there is a sameness that blurs lines and makes one place look similar to many other places. Distinction can be affected by design of place identity. This is often confused with designing a “sense of place” which in my opinion cannot be designed. A sense of place can only be achieved via extraordinarily effective physical design of space that is authentic in respect to the natural and cultural history of the place.

Make it Unique and Distinct. A memorable golf course is recognized by its physical elements such as bunker style, character of the green complexes and tees, strategic style, and amenity style. The course is committed to memory by the sensations, emotions, and mental pictures or spatial maps that the physical elements conjure, and that the backstory enhances.

One golf course with very strong identity and design coherency is Tobacco Road in Sanford, North Carolina. The land itself is an expended sand mine, a landscape that at one time succumbed to man’s conquest over nature, but as a golf course has risen again to beat at the chest of competition. The essence of this place is man vs. nature. The name itself, Tobacco Road, has meaning in North Carolina’s competitive sports world and in literary history.
Designed by the late Mike Strantz, Tobacco Road also has the elements required to well up emotion and fixate golf memories. After entering on an unassuming country road, one arrives at a rustic farmhouse-like clubhouse. The concept of rustic and rugged is consistent throughout the golf course with rusty farm implements supporting hole par signs, wooden half casks for benches and garbage bins, and large timbers for steps and retaining structures. The bunker style is part massive waste bunker, part gouged earth, part quarry remnant with some imposing forced carries. The common thread is that it is rugged and rustic and defiant. I even thought I smelled a cigar when I pulled up. Sure enough, they had them for sale.

Give it a Name. Don’t overuse this technique, but give special features names. Names are inseparable from identity and make places more memorable.Naming something humanizes it and attaches more emotion to that particular thing whether human or not. There probably are not many golfers who cannot see an image of Augusta National’s Amen Corner in their mind’s eye. Amen Corner is memorable for its exciting golf strategy, the emotional victories and defeats, the colors, fragrant azaleas, the water, the quiet of golf, and the roar!

Create Vanishing Points and Works of Art Using Angles. Famous golf course architect, Harry Colt was the master at using angles to create strategy and a memorable work of art on the golf
course. The photo below is one of Colt’s many incredible par 3 designs at Swinley Forest near London. Notice the angles created by landform, vegetation, and even the cart path.

Align Special Features as Focal Points or Plant Specimen Trees for Aiming. There are very few landscapes that require the intense focus that a golf course does. As we stand on a tee and survey the hole strategy and landing area, we often choose a focal point or target in the landscape or on the horizon. On short holes, sometimes the focal point is the flagstick on the green, but on longer holes, it is often another element,
such as a tall tree, the edge of a bunker, or a building. Usually a focal point is in the distance, but The Old Course at St. Andrews has a shed dead ahead to hit over on the “Road Hole” 17th, and the strategy is to choose one of the letters in the words “Old Course” to aim at when hitting over the shed (photo below, left.) The focal point doesn’t always have to be a target at which to aim. The starter’s shack at Kingsbarns Golf Links is a memorable arrival focal point (photo below, right.)

*Frame the View.* Framing a view focuses the attention inward and sometimes toward a vanishing point, as this view of the 10th Hole at Sunningdale GC in the UK (photo below.) Focal points are similar to landmarks except that focal points focus attention, whereas landmarks enhance spatial mapping.
Quirk is King: Let Design Quirks Happen.
Quirk is a final design technique that captivates attention. The quirky moniker is reserved for the odd, unusual, but somehow beloved and weird experiences that grab our attention. An example of quirk is the floating island green at Coeur D’Alene Golf Resort in Idaho. The green can be moved by a series of cables under the water and golfers take a ferry to putt on the green. The mound in the photo to the right is called “Braid’s Hat.” The story I was told is that there were spoils from building the 4th Hole on the Old Course at Walton Heath, so they just left them there and called the feature Briad’s Hat. These unique experiences and stories don’t disappoint and deliver lasting golf memories!

Summary
The four mental processes involved in creating a lasting golf memory are: sensation, spatial awareness, intense focus, and emotional response. Sensory input such as smell, touch, sight, hearing, and spatial awareness begin the formation of a golf memory, while emotional response and sharp focus positively influence the strength of the memory. It is important to note that the memorability of golf courses can be enhanced by good design, but the golf course architect must be thoughtful in order to identify the design opportunities. She/he must also take an active role to appropriately and skillfully use the design techniques, and carry them out to fruition in a design that must first meet the exacting demands of a professionally designed golf course.