

## Speed, Slope and Skill

by Dr. Michael J. Hurdzan

*Note: Dr. Hurdzan, like his partner Jack Kidwell, is a past president of the American Society of Golf Course Architects. Dr. Hurdzan's term ends this year; Kidwell's ran from 1979 to 1980. He is the author of fifteen articles in the past year including a four-part series on the evolution of the modern green which was published in "PGA Magazine", the official publication of the PGA of America. As a company, Kidwell-Hurdzan have designed courses in the state of Ohio (including five of the state park courses), numerous country clubs, as well as courses in Indiana, West Virginia, Massachusetts, Kentucky, Florida and Texas. The subject of this Guest Editorial relates to how a green's design contributes to the agony and ecstasy of putting.*

In a 1929 issue of "Golfers Magazine," I ran across an article where a British Golf Pro had built a putting machine to demonstrate that, statistically, holing a ten-foot putt was more luck than skill due to surface imperfections of greens. He was lobbying to increase the size of the cup so that a putt could be made by the putting within a predictable probability. What he was asking for was to make putting a test of skill and not a matter of luck. Fifty-six years later I, too, am campaigning for making putting a skill endeavor, but not by increasing the cup size as has been recently proposed.

Now, given the vastly improved surface conditions of the average green in 1985, I have almost no doubt that the putting machine could consistently hole putts into the standard 4¼" hole, but only a perfectly flat green. This is because there is only one determining factor for a flat putt and that is line, for the speed of the ball can vary greatly and still cause the putt to drop. But as soon as one introduces "break" into the putt, there begins a very complex relationship between speed and break, that is directly dependent upon, and proportional to, the slope of the green. On mild slopes the factors are not as critical, but as one increases the slope, the situation becomes an extremely complex matter of vector physics. The amount of break played is dependent upon the speed of the ball and vice-versa. Given much slope to the green, I would seriously doubt if the putting machine could consistently hole putts; for the steeper the slope and the faster the green, the more luck becomes the dominant force in putting and not skill.

The point is, if putting is to be a skillful pursuit, then speed and slope must be matched. Golf course architects determine the slope, and the golf course superintendent determines the speed. These two people must understand what the other is trying to achieve, and not violate the basic tenets of fair and skillful golf. To emphasize my major premise, let me give you two well documented examples of where these tenets were violated.

These examples involve two of history's greatest golf course architects, A.W. Tillinghast and Dr. Alister MacKenzie, two of the most famous golf courses in the world, and 150 of the best players of our time. The first example occurred in 1974, and again in 1984, at the U.S. Open at Winged Foot, when greens were shaved down to putting heights that were unimaginable by the golf architect when the course was built in 1923. Because Tillinghast was such a skilled designer, he perfectly matched the slope of the greens with the speed of the greens as determined by the prevailing maintenance practices of that time. The other example began with the 1982 Master's

at Augusta National, where again a premier golf architect, MacKenzie, perfectly matched the slopes of the greens with the anticipated speed of the Bermuda grass turf. At Augusta, the switch to bentgrass on slopes designed for Bermuda produced the same results as at Winged Foot; putting became luck, not skill. In both instances, I watched as the best players in the world, three and four putted from ten to twelve feet away. To my mind such situations are more emblematic of Russian Roulette than golf.

Citing these examples is not meant to tarnish the image of the victor, for he indeed may have been the most skillful player on the course for that tournament. But one cannot help wondering if our fetish to protect par has not led us to maintain facilities that separate players on some other basis than skill. To avoid such miscarriages of intent requires only a little intuitive thought about what is the optimum speed for your particular greens, and then adjusting your maintenance procedures to realize that goal. Unless your greens are perfectly flat, I would throw away the Stimpmeter, and rely on your own good judgment by playing your course as often as possible, talking with your members and using common sense. If both the golf course architect and superintendent understand the design intent and probable maintenance, while remembering the 3-S's, speed, slope and skill, golf will be better for it.

But we can go even further with this discussion and involve the golf professionals and the very vocal, and often uninformed, golfer. When the green committees insist on super fast greens, particularly at the most stressful times of the summer, namely July and August, they are actually jeopardizing the life of the golf greens. The reason? To obtain fast greens the superintendent has only a limited number of strategies available to him.

One technique is to keep the greens dry, which reduces the width of the leaf blade and thus it offers less resistance to the roll of the ball at even a moderate height of cut. But golfers do not want hard greens, so keeping greens dry is not permitted.

Another technique is to limit fertilizer which will also make skinny leaf blades, but then the greens tend to look a little yellow and they are slow to heal damaged areas. Golfers want "green" greens and no blemishes, so low fertility is out.

Yet another opinion is routine and continual topdressing with pure sand, and we all know "we don't want that work crew out there always throwing that sand around." So what technique is left to the golf course superintendent? Shorter mowing heights which are life-threatening to golf greens.

The grass plant must have a leaf surface proportional in size to the root system it must support and vice-versa. When grass glades are cut below an optimum, then they cannot produce sufficient "food" to keep an optimum amount of root system alive, so roots die. As more roots die in response to lower cutting heights, then the result is a grass plant with a shallow root system subsisting at a starvation level. This means that the green is in a physiologically weakened state, and just as a starving human, is more susceptible to diseases and parasites than when in a healthy state.

"Bull," you might say, "look at all the golf courses whose greens are mowed at 1/8" or less — their greens do perfectly well!" And I say, "Yes, look at them."

Muirfield, Firestone, Butler National and others have had to

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replace their entire greens, and you can't blame the replacement solely on Toronto bentgrass, for that strain has been used for sixty years or more. You can't blame it on some "new" specific bacterial wilt either for that organism has been around for thousands, perhaps millions of years. What you can blame it on is over-stressing a grass plant by mowing the grass too short and thus making it susceptible to a disease that normally would not cause a problem. Just as a minor infection can kill a severely weakened human, so can a minor disorder kill a severely weakened plant.

Plant pathologists are beginning to report bacterial wilt on all bentgrass varieties and not just C-15 Toronto. Their only common denominator is short mowing.

Golf should first be good, healthy recreation that provides hours of pleasure. This pleasure is intensified when played amid the beauty of a well-maintained sea of turfgrass. Furthermore, golf should be a game requiring a blend of strength, skill and strategy, with some luck thrown in as spice. So using these ingredients of golf, the most pleasurable blend is one that tests golfing skills, on goof turf conditions, that requires judgment and execution. To my mind risking this blend for the sake of super fast greens is a poor trade-off. Let's settle for everyday greens that roll 7½ to 8 feet with the Stimpmeter and everyone from golf course architects to skyscraper architects can enjoy the entire spectrum of pleasure that golf has to offer.

Credit: Ohio Golfer Magazine

## Dreams. We All Have Them

by Edwin Wollenberg, Retired Supt.

Sometime ago I read an article, stating that a hole-in-one is not really all that rare. There have been something like 650,000 of them reported since the start of the Golf Digest Hole In One Clearing House, which was in 1952.

Nonetheless, I will share with you a little story of one more, which I know will never be accepted by the Clearing House, but to me it was the most impressive golf shot of the century: MINE.

It was a slightly overcast day, breezy, and a mild threat of rain. Jim Byrd, congenial bartender of the American Legion and member of my foursome, drove the cart up to the No. 7 tee at Mangrove Bay Golf Club.

Jim, as is his custom, was having a miserable round and, as is not my custom, I wasn't far behind. But what the heck, it was still fun. My philosophy is that any round of golf, however poorly played, is more fun than no golf at all.

Anyway, No. 7 at Mangrove Bay is marked at 154 yards from the white tees, which is what we were playing. It's over the water but nonetheless is rated as 17 in the difficulty rating. Don't believe it. It's a treacherous hole, intimidating, laden with problems to test the best. Jim, not surprisingly, put his tee shot in the water.

I dug around in my bag for a ball.

"Wollenberg is looking for a water ball. Hah hah," bellowed Jim to the other two members of the foursome.

I ignored him — which wasn't easy to do — stepped up, 7 iron in hand. I dug in, waggled a bit, and cut loose with my beautiful fluid swing, as taught to me by George Capune at the Gary Country Club in 1961.

"You're gonna like that one," said Jim.

"Of course, (my conceit returning), I'm a pretty good golfer you know," I replied.

Because the cup was cut in front of the green, and hidden by some reeds and bulrushes, I never saw the ball hit the green.

We drove up to the green, but failed to see my ball. Damn it, it must have bounced off the green and into the trap.

Sooo, I walked slowly up to the flag, my heart beating with the rapidity of a jackhammer, thinking, no, it really couldn't be in the hole. But yes, there it was. The dingy Titlist — okay, so I'd hit a water ball — was in the hole. An ACE. An ace, an ace, I got an ace, I kept saying.

And on to the next hole, where I lined a drive down the middle like it was shot from a 30-30 rifle, a drive at least 250 yards. Easy game. Nothing to it I thought, as my confidence and conceit gained momentum. But then back to reality: Approach shot into the sand, two shots to get out, three putts, a triple bogey seven. But I didn't really care, I just wanted to get through with the round and get out of there, have a beer or something more alcoholic, buy everyone else a drink, as is the custom for anyone getting an ace.

Of course, we ended up at the Legion for this celebration, and that's where my wife caught up with me.

"Honey, I got an ace. A hole in one", I shouted to her.

"Honey", she replied, "I don't give a damn. Get your butt home. It's your turn to cook tonight, in case you forgot".

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