

NORWAY AND SKIING: INSEPARABLE FRIENDS

Norway and skiing are inseparable friends. For 6,000 years, this merger has defined Norway, Norwegians, and their relatives. Family activities, community bonding, and character development have been pioneered by this union. History has proven it. The present is uniquely embedded in it. Our future in part, will be defined by it. A ski is defined as one of a pair of long flat runners of plastic, metal, or wood that curve upward in front and may be attached to a boot for gliding over snow. Automatically, this would include Cross-country, Telemark, Ski Jumping and Alpine skiing, and Norway contributed immensely in each subject. And we wonder-What is Norway without skiing? And/or, What is skiing without Norway? The answer must lie in the history of the contributions to skiing and how they have influenced present day realizations.

Norway is considered the “Cradle of Skiing” by almost everyone around the world. The Olympic Organization has used rock carvings (from as far back as 6,000 years)¹ of early skiers as symbols of the Winter Olympic games. The rescue of Haakon Haakonsson in 1206 by Torstein Skevla and Skjervald Skrukka is exhibited in a painting² by Knud Bergslien, and that picture has given a “National Identity” to Norwegians. From 1850 to 1950, numerous innovations have led the way to the present day industry. In Oslo today, The National Library is advertising new exhibit- ‘Fodt med ski pa beina? En utstilling on nordmenn og ski’. (Born to ski? An exhibit about Norwegians and skiing). This exhibit pamphlet says “Norway-Cradle of Skiing”.

The basic concept of skiing has developed into differing disciplines. In the beginning, maybe 6,000 years ago, two boards with bent up tips were attached to a boot via a single strap per ski. The strap was secured by a hole through the middle of the ski and placed over the forward position of the foot. Even in these rock carvings you can see camber in the skis. Camber is defined as “a slightly arched surface”. Camber, especially in a ski, allows the skiers weight to be more evenly spread throughout the bottom of the ski (today’s language adds that downward pressure is diffused more evenly along the length of the ski). Skiing was a simple way to enhance movement over snow to hunt, herd and transport oneself. Skis were used in war maneuvers³ in 1761, and these skis had tips at both ends of the ski. The “twin tip’ concept showed up in skis around 230 years later in what we call twin tip skis, which are used for acrobatic purposes⁴. In 1761, however, the twin tips made it easy for the soldiers to advance as well as retreat instantaneously. Moreover, if a ski broke, the ski could be reversed for continued maneuvers. Besides war and work, Norwegians found ways to have fun with skis. They used the landscape available, and started to test certain skills-for example, bumpy runs, jumping, turning (with and without a pole), snow variations,⁵ etc

Around 1850, many innovations changed the number of opportunities in skiing. From the Telemark region of Norway, Sondre Norheim⁶ from Morgedal, found a way to attach and keep

¹ Skiing Heritage Vol 19, #2 June 2007

² Holmenkollen-The Ski Museum of Oslo, Norway

³ Skiing Heritage Vol 19,#2, p37

⁴ Skiing Heritage Vol 16, #4, p.34

⁵ Skiing Heritage Vol 20, #1,p9

⁶ Skiing Heritage Vol 20, #1,p9

the heel in the binding and still allow the heel to be lifted freely. By using dried birch tendrils, he could keep the skis attached to the feet. This concept and contraption enabled a skier to jump further and have his skis land with him. He then added side-cut (called waisting) to his skis. Side cut means that the shovel and tail of the ski are wider than the waist (middle) of the ski. This improvement made it easier for him to maneuver his skis, and it added speed to his controlled turns. By adding this advanced attachment and side-cut to a cambered ski, it was the innovation that is still active today. These developments were the necessary precursors to advancing ski opportunities, and are the elements of proficient skiing in the 21st century. These practical and simple concepts have created the award given to Sondre Norheim as the “Grandfather of modern skiing”. Alpine skiing, specifically, is grateful to Sondre Norheim for these improvements.

Because Sondre Norheim came from Telemark, his style of skiing is called Telemark, and it has some distinctive and innovative approaches. One most important concept was that of a skidded⁷ ski. In this style of skiing, the knees are bent and the inside knee is bent more so that the inside heel is lifted. In addition, more weight is shifted to the outside ski which is moved further forward than the inside ski and it is angled to the inside of the turn until the turn is complete. This is easier to ski than it is to describe it. This method creates a skidding action over the snow. After a little practice, after recognizing the type of snow you are moving on, and after adjusting your speed, you can stop in an instant just like Sondre Norheim did (probably some rudimentary for of a hockey stop we are familiar with today). Vaage writes that Norheim could ski without a pole, and he could come to an abrupt stop at the bottom of the hill, something others wearing only toe stops could not do. So this was actually a parallel ski turn with skidding. What a concept! After Sondre Norheim competed in Norway’s winter games, folks saw how graceful and easy he skied. The citizens would flock to the Iverslokken⁸ slope and say, “Let’s go Christie”. What they meant was let’s go ski the Telemark style (a skidded turn), and they named the turn after their capital Christiania. Christiania got its name from King Christian, but of course, the name has been changed back to current Oslo. The shortened name and fun activity made skiing a national pastime. Today, ski instruction includes the Christie turn (skidded), and it is practiced in some degree in almost every lesson-about 175 years from the time Sondre Norheim first demonstrated it. In 1868, Sondre Norheim skied 60 miles to compete at Iverslokken, won most events, and skied home. Two years later, he skied there again to find insufficient snow for competing, so he gave the first recorded ski lessons there. Where would Telemark and Alpine skiing be today without this innovative concept that originated in Norway?

But innovation did not stop there! You see, there are only three things you can do to a ski- 1. point it (also called steer, pivot, rotate, etc), 2. tip (alter edge angle from 0 to about 60-75 degrees) 3. bend (de-camber). The men from Telemark knew that ‘waisting’ a ski (adding side-cut to the ski) allowed the ski to bend more in the arc of the turn. In 1870-1890, documentation on binding placement variations affected the ability of the ski to bend⁹. Thus the performance of the ski to turn was also affected, making a faster turn in a more controlled manner. Add all these concepts together, and the first description of “carving “ is designed. They wrote that a bent ski allows one to ski on snow¹⁰ like a “knife buttering bread”. This concept of edge angle and its corresponding influence on ski performance (degree of carving) is paramount to enhancing fun

⁷ Skiing Heritage Vol 16, #2,p 15

⁸ Skiing Heritage Vol 19, #3, p 9

⁹ Skiing Heritage Vol 16, #1, p18

¹⁰ Skiing Heritage Vol 16, #2 ,p14

and establishing speed control in virtually all degrees of steeps. It is so alive today-175 years after its inception in Norway!

With this start, ski jumping became very popular in Norway, and it added some great innovations to skiing. Because the skis were more securely attached to the foot, jumpers became more daring each year. There are so many great jumpers from Norway, it is hard to name them all, and so they will be addressed collectively for their contributions. Jumpers needed safer places to land after they jumped, and so they collectively trampled the snow in the landing¹¹ area. Drifts, deep snow, and inconsistent snow made landings unsafe, and grooming the snow was started. Today, we talk of on-piste and off-piste, which means that we are in all natural snow conditions vs groomed areas-back country vs resort trails. Another 175 years later, most resorts are grooming their trails, a concept that actually started in Norway. The next obstacle for ski jumpers was to slow down quickly after the landing. Ski jumping competition was based on length of jump, but was heavily influenced by style. The Telemark landing style¹² was most preferred-that is, one knee lower than the other. Of course, falling was a no-no. So you can see that landing and stopping were most important. The way to stop especially from the Telemark style was to skid to a stop. But every once in awhile, a stem process was used-never documented, but you might catch stemming from some of the old films.

Holmenkollen ski jump held its first ski jump in January 1892, and drew over 10,000 spectators¹³. It became the focus of Norwegian skiing for a century, and thus a symbol of National Identity. As Norway was nearing its independence from Sweden, Norway was searching for its distinctive character. The Birkebeiners had demonstrated strength and courage in their skiing rescue in 1206. The military had proved bravery with their skiing/military maneuvers. Countrymen had demonstrated toughness from skiing in their hunting and herding duties. Surely, ski jumping at Holmenkollen was for tough minded, courageous Norwegians. Even in the first year of Norway's independence in 1906, King Haakon and Queen Maud¹⁴ attended Norway's Holmekollen competition on a cold and misty day, staying to the end to exemplify the courageous character of the new Norwegian. All of this led to a National Symbol that Norwegians were of strong, courageous, and innovative character. As John Allen said in "Et Ski Eventyr", "Take Holmenkollen out of Norway, and what do you have left?" Ski jumping is indeed a cultural heritage of Norway.

Up to 1909, every ski jumping world record was held by Norwegians¹⁵. From 1909 to 1921, the world records were held by Americans, but all of these Americans were Norwegian immigrants. Henry Hall was the first-born American to make a jump, and he was the son of a Norwegian immigrant. In 1924 and 1928 at Chamonix and St Moritz Olympics, Norwegians took 8 out of 9 medals. Alf Engen¹⁶ set many records in ski jumping, but he contributed so much more. In 1942, he became the US National combined champion. He was the first skier to have his picture on a box of Wheaties¹⁷. He is considered the man responsible for teaching the world to ski in powder and is credited for making Alta, Utah the powder capital of American skiing. In Red

¹¹ Skiing Heritage Vol 19, #4,2007 p17

¹² skiing Heritage Vol 19, #4, p18,19

¹³ Holmenkollen-The Ski Museum

¹⁴ Skiing Heritage Vol 19, #4,p20

¹⁵ Skiing Heritage Vol 18, #1 2006 p35

¹⁶ Skiing Heritage Vol 18, #1 p36

¹⁷ Skiing Heritage Vol 10, #2,p36

Wing, Minnesota, the Aurora Ski¹⁸ club held the first ski tournament in the US. This club was the first club to develop and distribute rules for American Ski competition. In the 1928 National Tournament, the event drew crowds of 25,000. The National Ski Association recognized Red Wing's February 8, 1887 competition as America's "first ski tournament". They were the first to introduce the Telemark techniques "known as the Red Wing style". The Norge Ski Training Center in Fox River Grove, IL is training jumpers seasonally. Where would skiing be today without these Norwegian innovators and contributors?

Innovations keep pouring forth. The first ski laminations were created around 1891. Ash wood was becoming scarce, and skis needed to be lighter in weight. At Langesund Ski and Woodwork factory starting in 1893¹⁹, experimenting went on for 30 years to make stronger and lighter skis. They tried laminations from side to side (to reduce the wearing out of edges) and from top to bottom. In 1932/33, the Splitkeine Patent²⁰ arrived using skins of Hickory separated by a double-tapered core of lighter wood: laminated vertically and/or horizontally. They looked for spring, durability, and light weight. Later on in the 1950's etc, great stride were made in glues, technology, and components. Howard Head and others took these innovations and advanced the manufacture of skis to the many types available today. Where would today's skis be without these Norwegian creative wonders?

Even more innovations? Better bindings may have started with Sondre Norheim, but Marius Erickson designed a better toe piece. Hjalmer Hvam²¹ designed the first safety bindings. Ski waxes have been used almost forever in Norway. Many secret recipes pioneered by their skiing owners were used to make their skis perform at various levels. Waxing today is accomplished to make skiing easier with enhanced performance. In 1946, SWIX, a Norwegian company, started manufacturing and selling ski wax, and today it is a well known product around the world.

With all these developments surrounding equipment, today's ski definition becomes more and more important. Skis were made of wood from the beginning of skiing to the present, however, fiberglass, plastics, metals, etc have been incorporated into the skis manufactured today. Wood skis are still manufactured, but their presence in the marketplace is small compared to composite skis. To learn more about wooden skis, wooden ski manufacturers, care and maintenance of wooden skis, go to skinnyski.com for oodles of information. Each ski has particular parameters, but there are some generalities that will help us here. Alpine skis have metal edges and bindings that attach both the heel and toe to the ski. Telemark skis have metal edges and an attached toe binding-leaving the heel free to be lifted. Cross-country skis have no metal edges and the toe is attached leaving the heel free to be lifted. Cross-country skis are very skinny compared to 40 years ago. Jumping skis are like cross-country skis (in that the toe is attached) except that they are usually much longer and much wider. There are more differences within each ski category that need to be mentioned here, and those differences are introduced to each perspective buyer at a ski shop.

¹⁸ Red Wing-Birthplace of American Ski Jumping

¹⁹ Skiing Heritage Vol 15, #4,p13

²⁰ Skiing Heritage Vol 15, #4 p13

²¹ Skiing Heritage Vol 14, #3 p26

SO-Where would Alpine skiing be today without Norway?

Well,,,,,,,,,Skiing started in Norway! Telemark skiing started in Norway! Telemark skiing introduced skidding (Christy turns), which came from Norway! Bindings with heel attachments started in Norway! Binding placements and their relation to bend (de-camber)(1870-1890) of the ski that led to carving started in Norway! Weight transfer started in Norway! Metal edges were incorporated into the skis by Fritjof Nansen²², before he crossed Greenland in 1888. Safety bindings started in Norway! The concept of laminations started in Norway! Grooming of snow (even though it was rudimentary) started in Norway! First ski school²³ started in Norway in 1888! Ski competition²⁴ started in 1885 in Norway! Waxing skis started in Norway! Acrobatics and extreme skiing started in Norway! Ski jumping started in Norway! Each of these developments led to the birth of Alpine skiing as we know it today! Without a doubt, Alpine skiing is an inseparable friend to Norway!!!!

SO-How did “Alpine” start to define a style of skiing. Norwegians have introduced skiing to the world, and they started with the Europeans, who took this great activity and applied it to their landscape-the Alps! In the 1890’s, Austrian local skiers in Graz and Murzzuschlag²⁵, followed the Norwegian businessmen, engineers, and students working and studying in Austria and Germany. They attempted to copy the Telemark turn, went on mini-tours, climbed the local mountains, and organized races. Then came additional inspiration in the form of a book called “Ski paa Groenland”. This book is a story telling of Fritjof Nansen’s trek over Greenland. This book inspired citizens from all over the world to inquire more about skiing, yet it seemed to advance first, to the inhabitants near the Alps.

In the dictionary²⁶, alpine is described as: 1.the Alps or their inhabitants, 2. of or relating to high mountains, 3.of or related to downhill racing, and slalom skiing events,4. living or growing on mountains above the tree line,5.intended or concerned with mountaineering. Let’s look at each of these and connect a few dots.

1. The Alps border parts of Austria, Germany, France, Italy and Switzerland. Skiing was introduced to the Alps area by Norwegians working and studying in towns near the Alps. The citizens observed the fun one could have playing in the snow.
2. High indeed! Mount Blanc is 15,771 feet high whereas the highest peak in Norway is Galdhoppiggen in Jotunheimen at 4,810 feet.
3. Downhill racing actually got started in California during the 1860-1890’s. Snowshoe Thompson introduced skiing as a phenomenon to deliver mail, and the miners made it into a sport. The first slalom event took place in Norway, but it was not a timed race-it was judged by style. The first timed, modern slalom race was in Muren, and the officials named it the slalom after a similar event in Norway. Slalom- sla means slope and lom refers to path in Norwegian.
4. The timberline in Norway is much lower in elevation because of the latitude of Norway.
5. Mountaineering is practiced in Norway, but not at the same elevations.

²² Skiing Heritage Vol 16 #4 p34

²³ Skiing Heritage Vol 19 #3 p13

²⁴ Skiing Heritage Vol 19 #4 p19

²⁵ Skiing Heritage Vol 20,#1 p9

²⁶ The American Heritage Dictionary

The Alps are distinctly different than the Norwegian hills, and yet all the basic Norwegian ideas about skiing were utilized to evolve a style of skiing that has been promoted around the world.

The business of skiing has grown. Norwegians introduced skiing all over the world. Approximately 60 millions visits are recorded at Alpine resorts in the US in a single winter season. The Twin Cities Ski Challenge boasts that 20,000 adult skiers will pass through the Giant slalom courses in this season. Cross-country skiers are figured to be around 500,000 in Minnesota alone. The Birkebeiner in Hayward Wisconsin had about 7,000 participants. All data seems to indicate the enormity of the sport, even though most figures may be approximations. Wouldn't it be fun to know how big this activity is? At least we know it is gigantic!

So where does Alpine skiing stand today? It has to stand as an inseparable friend to Norway. Almost all of the innovations for Alpine skis originated in Norway. Words that are universally accepted like ski, slalom, birkebeiner, Telemark, camber, Christie, side-cut(waisting), etc came Norway. As skis, ski skills, and terrain developed, moguls were created, and to describe these mounds, skiers went back to Norway and found a word in old Norse that means "heap"- and that word was mugi²⁷. When Norway realized that other nations were winning Olympic Alpine events, they changed their thinking to say that skiing is "Our National Sport" and designed a program to excel in their heritage sport. Stein Eriksen²⁸ led the way with Olympic medal winnings (1950-1954) and gave Norway the leadership is desired. In addition, he became an international ambassador to skiing with personal appearances, authoring a book, "Come Ski With Me", demonstrating his reverse shoulder technique, and performing his famous backward flip, To date, Norway has won more Olympic medals than any other nation, by a considerable margin. Steinar Hybertsen produced a DVD called "Et Ski Eventyr" telling great stories about skiing, Norway, and contributing Norwegians. He shows all styles of skiing, but the most time is spent on Alpine skiing. His story plus all these other data, say without a doubt that skiing, whether it be Telemark, jumping, cross-country, or alpine, and Norway are inseparable friends- a national sport, a culture, and a heritage that is unmistakable.

²⁷ The American Heritage Dictionary

²⁸ Skiing Heritage Vol 15, #1 p9