

SOUL OF THE WILDERNESS

Dashing *Through* the Snow— Amundsen, Scott, and *Their* Modern-Day Counterparts

BY JAMES M. GLOVER

WHenever I hear the word Antarctica, the first thing I think of is the famous beautifully dramatic story of the race to the South Pole between the Norwegian Roald Amundsen and the Englishman Robert Scott in 1911 and 1912. To me that story is as powerful as I imagine the story of the Battle of Gettysburg would be to a Civil War historian, or as *The Odyssey* is to a classicist. It contains the elements of all great stories: love and hate, pride and humility, courage and cowardice, and an epic journey into the unknown. Like all good stories, it offers lessons and insights still worthwhile today. In this article, I'd like to review the story of Amundsen and Scott to see what it might tell us about wilderness leadership and about how our specific cultures affect our attitudes toward wilderness and its exploration.

In June 1910 Robert Scott left England, to great fanfare, with a crew of 72 men who had the purpose of reaching the South Pole while conducting an ambitious program of scientific research. Two months later Amundsen, in the quiet of night and to no fanfare, left Norway with a crew of only 19 men and the expressed goal of exploring the North Pole. But when Amundsen was far enough away that no one could stop him, he had his brother announce a secret he'd kept for two years: He was not going north at all but was out to beat Scott to "the last great prize," the South Pole.

By January 1911 Scott's 70-day lead was gone, for both parties had reached Antarctica and set up their base camps. By December 13, 1911, it was over: On that day Amundsen and four other Norwegian skiers and dog mushers arrived comfortably at the South Pole. Three hundred sixty miles and, as it would turn out, 34 days behind them, five British explorers led by Scott trudged toward the same destination.

The Norwegian team would safely return from the Pole with time, energy, and supplies to spare. Scott's group would reach the Pole but would never return, having run out of time, energy, health, food, water, and other essential supplies. The dramatic difference in results for the two parties was a reflection of the difference in leadership and in cultural attitudes toward wilderness,

indigenous cultures, and polar exploration. Those differences are thoroughly explored in Roland Huntford's excellent book, *Scott and Amundsen* (1979). Although there are many other books on the same subject, Huntford's is by far the best, and virtually everything in the following paragraphs has been pointed out by Huntford. His book is one that every student of wilderness leadership should read three or four times.

Scott and Amundsen's Backgrounds

A comparison of Scott and Amundsen must begin with their backgrounds. Amundsen was born in Norway on July 16, 1872. The Norway in which he grew up was small, economically poor, and sparsely populated. It was, however, a nation of great shipbuilders and sailors. Sea merchants, of which his father was a very successful one, were much revered. And, significantly, nature dominated the landscape. Amundsen learned to ski about as early as he learned to walk. Shipyards were his childhood playgrounds, and he learned to sail at a very early age.

During the time of Amundsen's childhood and early development, polar exploration was a source of great nationalistic pride in Norway. Foremost among Norwegian explorer-heroes was Fridtjof Nansen, whose many innovations for polar travel included the development of a light and flexible "sledge" on skis; the Nansen Cooker, an early backcountry stove that became a modern prototype; specially designed clothing and tents; the use of skis; and the use of small streamlined expeditions. Additionally, Nansen was the first explorer to scientifically work out food rations, and he recognized and demonstrated the value of fat in a polar diet. In April 1895, Nansen reached 88 degrees and 13 minutes north latitude, a record "farthest north." Such exploits were followed closely by the then 23-year-old Amundsen.

The culture in which Robert Scott was born and grew up was much different. He was four years older than Amundsen, so we may think of them as part of the same generation. But whereas Amundsen's nation was small, rural, and unpowerful, Scott's England of the late 1800s was rich and powerful, highly industrial, highly militaristic, and a place where humans dominated the landscape. Scott's family was affluent from generations of successful navy careers. Though very strong physically, Scott had no intrinsic interest in polar exploration; he went into it as a good way to advance his own naval career.

Two British norms that directly affected Scott's outlook prevailed in the late 1800s. The first was a preferred rule of polar travel as put down by Sir Clements Markham, the acknowledged father of British Antarctic exploration. The rule was simple: "No skis. No dogs." The second norm explains the



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first one. It was a peculiarly English admiration for unnecessary suffering. As Huntford put it: "One aspect of the English romantic movement was to equate suffering with achievement. There was a virtue in doing things the hard way" (Huntford 1979, 138). These two ideas resulted in the British preference for "man-hauling," a technique of snow travel that means exactly what the phrase implies: men lashed in front of large sledges like oxen, pulling these sledges across thousands of miles of snow and ice.

The Contest

In many ways Amundsen's entire life seems to have been a preparation for his masterpiece South Pole expedition. From 1903 to 1906, he conducted a trip to the northern latitudes that resulted in the first "northwest passage": he sailed from eastern North America to the Pacific Ocean. More importantly, he systematically studied Eskimo skills. He began dressing entirely in animal skins and furs. He ate caribou. He ate a dog, which he found "most excellent." He practiced dog sledging under the tutelage of experts, learning to coat sledge runners with ice to reduce friction and to use the fan-shaped dog formation, which helps avoid entire teams plunging into crevasses.

When he finally returned to Norway from that voyage Amundsen began preparing for what he hoped would be the discovery of the North Pole. However, when it was announced (and the world believed) in September 1909 that Robert Peary had reached the North Pole, Amundsen no longer was interested in going north. He decided instead to try to be the first explorer at the South Pole (a plan he kept a secret for two more years). The innovations he made were many. For example, he had goggles specially designed from a pattern originally conceived by Peary's nemesis, Frederick Cook; he had pemmican specially made with peas and oatmeal added for bulk and fiber; he devised a dog pemmican containing fish meat and additional fat, which could also be eaten by humans if necessary; he designed sledging cases of ash from Denmark with circular lids that were easy to open; he designed his own eight-foot-long skis from some high-quality hickory he had purchased nine years be-

Table 1: Comparison of Staff Selections

Amundsen	Scott
One Olympic skier	Many academics
One world-class dog driver	Many navy men
No doctor	Scientifically <i>professional</i>
No academics	For polar travel, <i>amateur</i>
Small, mobile	Two paying volunteers
As polar travelers, very <i>professional</i>	Large, cumbersome
Aboard <i>Fram</i> : 19 men and 100 dogs	Aboard <i>Terra Nova</i> : 72 men, 33 dogs, 19 ponies, 3 motor sledges

fore; he had sleeping bags custom-designed using only fur from one-year-old reindeer calves of a certain type slaughtered only in the fall; he ordered dogs from North Greenland, generally considered the best in the world; and he packed various layers of Eskimo sealskins and furs.

Robert Scott's preparations, unhappily, were much different. He began planning two years later than Amundsen. His equipment was almost all "over-the-counter" or based on previous British patterns. In sum, as one Norwegian writer put it, he "avoided with diligence the experience of his Arctic predecessors" (Huntford 1979, 266).

Table 1 shows the differences in staff by the two European leaders. Amundsen's, as can be seen, was small, mobile, and as wilderness travelers, very professional. Scott's was large and bulky, scientifically professional but amateur as polar travelers.

What Amundsen and Scott accomplished during the Antarctic fall and winter of 1911 tells much about the two expeditions. For starters, Amundsen had strict priorities and a clear goal. As he wrote that winter, "Our plan is one, one, and again one alone-to reach the Pole.

For that goal, I have decided to throw everything else aside" (Huntford 1979, 355). To accomplish his goal, Amundsen took advantage of the short fall season by depoting a huge amount of supplies far down his route toward the South Pole.

Table 2 compares the depot record of the two competing expeditions. As can be seen, Amundsen managed to depot three times the amount of supplies as did Scott. He also was able to depot supplies much farther south, and his depots were almost infinitely better marked so that they would easily be found when the big expedition finally was at hand. Huntford writes that Amundsen's depoting was "the first time in the short history of Antarctic exploration that a sane foundation had been built for an assault on the Pole" (Huntford 1979, 333).

When Amundsen's depot work was finished, he and his small crew settled in for the long dark Antarctic winter. But again, Amundsen made excellent use of his time and demonstrated his superb ability to raise an expeditionary group to the highest level of performance. He had many tricks for sustaining morale. For example, he assigned each man the care of 14 to 15 dogs, thus assuring each person of direct and meaningful contact with

Table 2: Summer Depot Summary

	Crew of:	Number trips	Amount depoted	Farthest south depot	# of pennants to mark each depot
Amundsen:	8 men 50 dogs	3	3 tons	82"	20-60
Scott:	13 men	1	1 ton	79.5	1

Table 3: Comparison of Margins of Safety at Start of Polar Journey

	Supplies in depots	Pounds of supplies per man	Route markers	Men to Pole
Amundsen:	3 tons	1,300	every $\frac{1}{3}$ mile	5
Scott:	1 ton	124	none	5

warm living beings. Each morning he hosted a competition to guess the outside temperature and gave away prizes for the winners—thus, as he believed, attuning the crew members to the Antarctic weather and getting them out into the fresh air first thing each morning. He had the camp cook serve fresh seal meat daily, which prevented scurvy; and for breakfast each morning the crew members were presented with hotcakes garnished with preserved whortleberries and cloudberry, which further prevented scurvy. The crew members also ate each day whole-meal bread with wheat germ, leavened by fresh yeast brewed on site at their base camp (providing them with vitamin B complex).

Scott's winter was not exceptionally unproductive by most expedition standards up until that time. But compared with Amundsen's, it was a study in wasted time. Scott had partitions erected that separated officers and gentlemen from the rest of the crew. He conducted many compulsory classes, but none on such topics as navigation and skiing. Scott himself had long bouts with severe depression and often withdrew from his crew. There was very little preparation for the final journey, at least by comparison with Amundsen. Scott did make three short trial runs during the winter, but all these emphasized man-hauling, with little to no skiing or dog sledding practiced. Scott's diet was also much inferior to

On their climb to the Polar Plateau, they accomplished one of the great individual feats in the history of exploration: They climbed 10,000 feet and covered 44 horizontal miles, sledges and all, in four days.

It's clear that Amundsen treated his crew members kindly, but he expected and received in return an enormous amount of work. A daily work schedule was established and generally adhered to. Huge workrooms were carved in snow, and in those rooms sledges were overhauled and their weight reduced. Three brand-new sledges were created—very light ones for the Polar Plateau. Two pairs of skis per person were built or renovated. Ski boots were torn apart and renovated four different times, each time making them warmer and more flexible. And new tents with sewn-in floors were created, the comfort of which was much appreciated on the final trip to the Pole.

Amundsen's. He served his crew white bread; much "tin food," containing little or no vitamin C; very little fresh seal meat compared to Amundsen's; and seal meat overdone on those occasions when it was served, thus further reducing its ability to provide the critical vitamin C.

There were other errors in Scott's preparation for the Pole. Taken individually they do not seem like much, but for such a challenging trip, when crew members are stretched to their limits even under the best planning and conditions, they constitute what today would probably be considered malpractice. A few examples: The furs and garments he provided didn't have the hoods connected

to the coats. His tents didn't have sewn-in floors, and the crew's teepees were hard to erect in gales. Scott's primary attempt at innovation, the use of "motor sledges" (the forerunners of snowmobiles), was totally defeated because he brought along no tools or spare parts to work on those machines.

His other major deviation from Amundsen was his attempt to use ponies (instead of dogs) to pull sledges. This had been tried on previous British expeditions and had failed miserably for several reasons. For starters, the ponies' hooves punched through the snow crust. Then, unlike dogs, the ponies' entire bodies sweated profusely. Their flanks became encased in solid ice. At night they had to be rubbed down and covered in blankets and have snow walls built around them, thus taking up critical time and energy. Despite Scott's efforts to care for the ponies, they all died early in the trip south.

As the race to the South Pole began, Amundsen was in much better shape. Table 3 compares margins of safety at the start of the two polar journeys. The pounds of supplies per man for Amundsen's crew is so much greater than Scott's not only because he stashed away three times as many supplies, it is also because Scott used an elaborate system of leap-frogging men, dog teams, and ponies for much of the way south. Amundsen left his base camp with just five people.

Table 4 compares the travel efficiencies of the two groups during the first stage of their polar journeys. Amundsen's party, using dogs and skis, was able to pull twice as much gear per sledge, and go about a third of the distance farther each day than was Scott's. Even more important, Amundsen's party was able to do this in workdays that were only half to two-thirds as long and, because they were not man-hauling their sledges, were able to go to bed each evening with energy to spare. The men in Scott's party, by comparison, spent every ounce of energy every day.

Another key-again—was nutrition. Just as Amundsen's crew had eaten more healthfully during the winter, they continued to do so while they were heading for the Pole. They ate biscuits made with whole-meal flour and rolled oats leavened

with yeast for vitamin B. They had all they could eat on their return trip. And, very significantly, they were back to their sources of vitamin C (to avoid scurvy) in two and a half months. That source of vitamin C was the seal meat that they stored in their depots.

Scott's crew ate a lot worse. Their biscuits were made from white flour, leavened with sodium bicarbonate-no vitamin B. They were out of reach of all vitamin C for well over three months. On the way out toward the Pole, they ate about the same number of calories (4,500) per day as did Amundsen's crew. However, they were spending a lot more energy because they were man-hauling, and on the return trip they had even less to eat, while Amundsen's crew had more to eat than they could consume. Scott's party, consequently, was in poor shape even before it reached the Pole.

As Amundsen's crew got closer to the Pole, and when they returned from it, Amundsen's careful planning and leadership became more and more appreciated by his crew. They were able to set up camp and feed their dogs in one hour at the end of each day, thus again conserving crucial time and energy. On their climb to the Polar Plateau, they accomplished one of the great individual feats in the history of exploration: They climbed 10,000 feet and covered 44 horizontal miles, sledges and all, in four days. During the exact same four days, Scott's party covered just eight more miles on flat ground. As Amundsen's crew went along, they killed their dogs and ate the fresh meat for still further protection against scurvy. Four of the five crew members were trained navigators, thus giving them huge protection against getting lost. They placed a depot every degree (60 miles) to the Pole, and every depot was marked for five miles in each direction perpendicular to their path-thus insuring that they would never miss a depot on their return trip.

When they reached the South Pole on December 13, 1911, as already noted, Scott was still 360 miles away. But the critical time on such expeditions is the return trip. Many an expedition has reached its geographic goal only to experience disaster and death on the return trip. Amundsen's party did not even come

	Pounds per sledge	Hours traveled per day	Distance covered per day	Condition of men each night
Amundsen:	880	5-6	15-20 miles	energy to spare
Scott:	450	8+	1 O-1 3 miles	exhausted

close to such a disaster. For the first two-thirds of the way back, Amundsen limited his charges to 15 miles per day even though they were capable of covering more. Instead of going farther, Amundsen had his people rest for sixteen hours out of every twenty-four and eat as much as they possibly could. Then, for the last third of the return trip, Amundsen had them sprint. They ran fifteen to twenty miles at a time, rested for eight hours, then got up and ran again. They returned to their base camp (called Framheim) on January 26, 1912. They came in early in the morning in such good condition that they played a joke on their waiting companions. They sneaked in and aroused the men from their sleep. The first one to be awakened literally thought they were ghosts because they were never expected back so soon.

Scott's party of five finally reached the South Pole on January 17, 1912. Already starving and dehydrated, their morale plunged when they saw a tent erected at the Pole telling them that the Norwegians had been there first. Their return trip must have been a nightmare, though we can only imagine it because none survived to tell the story. From their journals we know that they had to march, pulling sledges, 12 of every 24 hours. Finding each depot became a crisis because they were poorly marked. Yet, incredibly, Scott wasted several hours of good traveling weather on February 17 collecting rock samples. That very same day the first member of their party, named Evans, died. Scott may consciously have abandoned Evans, though this is impossible to say for sure from the records.

On March 1, the remainder of Scott's party found their depot at 82 degrees south. But 75% of the kerosene stored there had leaked away. It was commonly known that kerosene leaks in extreme cold, and Scott had made the mistake of

not sealing the containers properly for this environment. (Some of Amundsen's kerosene was found fifty years later, and none had leaked.)

On March 2 Scott, now rather desperate, tried to blame the elements for his situation. He wrote in his diary, "We none of us expected these terribly low temperatures" (Huntford 1979, 534). By this time his party was in terribly bad health. Scott himself had an injured shoulder and leg that were not healing. One of his men had already lost several toes and fingers from frostbite. All five were starving. Evans, as noted, had already died, after becoming paralyzed and acting stupidly, possibly from a brain hemorrhage resulting from scurvy. A crew member named Oates was suffering badly from gangrene. Others would soon follow. Scott and his crew spent their last nine days (March 2 1-29, 1912) dying in a tent in a blizzard. They were only 11 miles from where they could have been rescued. But they were not found until the following spring. An earlier mistake by Scott proved to be the fatal one. He had given confusing orders regarding a rescue party coming south with dogs. No such party ever reached him. His crew members, after years of military-style discipline and execution, in which nothing is ever done unless specific orders are given, were unable to act on their own and go far enough south to rescue Scott. The likely cause of death for Scott's polar party was some combination of scurvy, gangrene, starvation, dehydration, and hypothermia.

Keys to Amundsen's Success

There were many keys to Amundsen's success. Perhaps most important was his preparation. His trip was as thorough and well planned as any high-level wilderness expedition can ever hope to be. Second was his innovation. As already men-

tioned, he designed many items of equipment specifically for this particular expedition. He studied the innovations of his predecessors carefully, and he saw where he could take what they had done one step further. Closely related to this was the third key to his success: his open-mindedness. Amundsen did not care where good ideas came from. If they were good, he was happy to use them. The most obvious examples are found in his borrowing from the Eskimo style of living and traveling in extreme conditions. The British saw Eskimos as primitive clowns whose technology was unworthy of consideration. Amundsen saw them as intelligent fellow humans who, thanks to thousands of years of experience, had devised the best methods of polar living and travel.

and such a difficult goal at that, it would have to be the primary goal and, really, the only goal.

The keys to Scott's disaster included poor preparation; rigid adherence to British methods; rigid adherence to naval discipline and chain of command; large cumbersome parties; poor judgment at many stages of the process; casual selection of personnel for such a difficult endeavor; a weak leadership personality (he was generally insecure, defensive, and somewhat eager to shift blame); and lack of focus on goals. Scott became a hero in Britain because of the noble effort that he and his crew put forth and because of the scientific work his party conducted in addition to its attempt at the Pole. But had he given the one goal or the other (either scientific discovery or the attain-

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The fourth key to Amundsen's success was the small size of his party. It enabled him to be fast and adaptable. Closely related was the fifth key to his success: the selection of personnel. He chose his party with extreme care and worked hard at obtaining the very best people he could get. Sixth was his delegation of responsibility. Amundsen seems to have clearly articulated specific goals, but he let his expert wilderness travelers make decisions about how those goals might be attained. The seventh and final key to Amundsen's success was his clear focus on a goal. Some might argue that he was overly obsessed with a rather silly goal. What, after all, is the value to human knowledge of five outdoor athletes being the first people to reach an arbitrary point on the map? It is a good question. Nevertheless, entire countries devoted resources to the attainment of it. And at least Amundsen recognized that if such a thing was going to be a goal,

ment of the Pole) clear priority, he might not have had to sacrifice human lives for their attainment.

Lessons Learned

The story of the race for the South Pole offers obvious lessons for expedition planners. It also shows, as mentioned, that our approaches to the wilderness experience are culturally bound. One has the feeling, for example, that Amundsen's team was working with nature, taking, so to speak, what nature was willing to give. In my mind's eye, I see Amundsen and his mates gliding almost effortlessly across the snow on their waxed skis or on the ice-crusted runners of their dogsleds, comfortable in the fur clothing developed over centuries by polar peoples. Or—an even more powerful image—I see them patiently spending the long Antarctic winter perfecting their equipment in rooms built entirely of snow

By contrast, I see Scott's people approaching the same journey as if it were a mythical struggle: man against the forces of nature. They are, after all, citizens of a nation that for several centuries dominated the world militarily and economically. They disdain dogs, skis, and the clothing of Eskimos. But their endless "man-hauling" might be seen as a metaphor for the dispiriting effort it takes to maintain a world empire. Strapped into harnesses like pack mules, neck muscles bulging, feet plunging into the snow, they drag overloaded sledges over a distance that in the end proves to be, quite literally, impossible.

Today, as our wilderness areas become more precious and rare, we need to remember that there are still many approaches to wilderness exploration. To some of us wilderness is a place for meditation and contemplation; to others it's still a place for action, competition, conquering, and winning glory for one's country. Indeed, we may be witnessing the start of a new era in which wild places are increasingly seen as playing fields for international expeditionary competitions. Every year now we hear of highly publicized races across Antarctica. There was even, in 1995–1996, another race between a Norwegian, Roger Mear, and a Brit, Borge Ousland. Each this time trying to be the first to cross "alone and unaided" (Roberts, 1996).

Meanwhile, new forms of wilderness racing keep popping up. There's "skymarathoning," for example, which, as journalist Martin Dugard succinctly puts it, "basically entails running 26.2-mile races in places better suited for mountaineers" (Dugard 1995a). There are cash prizes in this sport, and even a "circuit," with events at places like Mount Kenya in Kenya and Mont Blanc in France. There's also "adventure-racing," which involves combinations of running, rafting, mountain biking, climbing, rappelling, and other forms of transport on long routes through wild country (Dugard 1995b). And finally (for now), there's that May day in 1996 when eight climbers died on Mount Everest. On the afternoon of that event, more than 30 people summited the world's highest peak. Two climbers coming down after summiting had to wait 45 minutes at a

ledge called the Hillary Step for 20 others to pass on their way up. A bit later the storm hit, featuring 70-mile-per-hour winds. Besides the eight who eventually died, eleven other climbers, "several with little or no Himalayan experience," (Herr 1996) could not find their tents and spent the night wandering around the snowfields and crevasses at 26,000 feet. Mountaineer-journalist Jon Krakauer happened to be there, and his best-selling account of the events, *Into Thin Air*, has provoked some needed discussion about the growing business of guided high-adventure tourism and the persistence in many countries of the "conquest" approach to wilderness use.

This racing and peak-bagging, I suspect, reflects cultures like ours in the United States, in which television and other media idealize competition, aggression, winning, and physical performance. The

desire for physical challenge in relatively pristine settings seems to me both natural and healthy. What seems less so is the attitude that any such adventure is about humans against nature. Moreover, the rather egotistical drive to climb the highest peak or cross the remotest piece of landscape seems analogous nowadays to big-game trophy hunting, where the participant becomes so fixated on the prize and the applause that the joy in the process is lost.

I admire Amundsen for his leadership style, for his ability to work in harmony with that rather inhospitable wilderness, for his love of the outdoors, for his craftsmanship, and for his commitment to the health and safety of his followers. It seems ironic, though, that by focusing so narrowly on the prize, he embraced, and indeed promoted, the concept of wilderness as a place to win glory for oneself or one's country.

I like to believe that Amundsen, despite his obsession with the destination, also enjoyed the journey. There's evidence that he did, such as the passage in his journal, dated November 13, 1910, on his way to the Pole: "... the land looks like a fairytale. Pinnacle after pinnacle, peak after peak-crevassed, wild as any land on our globe, it lies, unseen and untrodden. It is a wonderful feeling to travel along it" (Huntford 1979, 438).
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