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Does nature still matter in sport? In the balancing between natural and scientific training, Swedish upper-secondary ski schools have played an important role. This paper deals with specific landscape features for testing at three Swedish ski schools: Hallstatestet in Sollefteå, Hovfjällsracet in Torsby, and Stoltjonastestet in Järpen. The following questions will be addressed: How do the coaches at each school use local tests to analyze performance? How is the importance of local tests articulated, and what roles do history and nature play in this process? The paper concludes that the use of local landscapes to articulate elite performance connects ideas of measurability and scientization to the lingering tradition of natural training. Local landscapes thereby become a mediator between scientific and experiential knowledge about sport performance and point out how local sport heritage can be used for addressing environmental issues in sport.

Keywords: training, cross-country skiing, performance testing, endurance sport, training landscapes

Do natural conditions and local landscapes still matter in sport? In the face of climate change and environmental degradation, sport can no longer escape issues of its relation to the natural environment. Many sports have a long-standing dependence on outdoor landscapes, and skiing is perhaps one of the most evident examples. Cross-country skiing emerged where there was snow, and it is still mainly an outdoor sport. It has a long tradition in Sweden as an important part of Swedish nationalism, though not as important as in Norway. It is a very...
traditional sport and simultaneously one of the most ambitious in terms of sportification, scientific influence, and technological innovation. Cross-country skiing used to be considered Sweden’s national sport and though it was eclipsed by football already in the mid-20th century, it is still a sport that is important to many Swedes. All the International Ski and Snowboard Federation World Cup races are televised and the Vasaloppet, held on the first Sunday in March since 1922, is the largest ski race in the world. Some of the landscapes where skiing has a long tradition have become a form of movement heritage, their status elevated to national importance. New technologies and scientific developments have led to a stronger emphasis on standardized indoor training on treadmills and ski ergometers. This development is a continuation of a longer historical debate between skiers and coaches who have argued for “natural training” firmly rooted in the local landscape and physiologists promoting “rational training” built on science and advanced technology. The idea that the natural matter in training goes a long way back, to the holistic approach of coaches such as Sweden’s Gösta Olander and Australia’s Percy Cerutty. Historically, talented young skiers had to find their own way of combining a career in elite skiing with education and work. In the 1960s, after cross-country skiing had gone through decades of sportification and the demands for reaching the highest level had increased, the Swedish Ski Association joined forces with other sport federations and argued for the need for special schools. These upper-secondary sport schools would allow for an early specialization and more training hours, while still making sure that skiers who did not reach the national team had an education to fall back on. In a context where Sweden had abandoned its amateur regulations for sport in 1967, the first upper secondary sport schools were started in 1972.

This article investigates the role of local outdoor landscapes in the training and testing of elite ski talents at Swedish upper secondary sport schools, which offer cross-country skiing in their educational program. I will hereafter describe these schools only as ski schools (not to be confused with the kind of learn-to-ski “schools” found in alpine ski resorts). To compare with another sport and context, they resemble football academies where testing and evaluating current and future performance is also a topic of intense scrutiny. These schools were initiated in the 1970s as a compromise between talent development optimization and educational perspectives, and the local landscapes and their suitability for ski training were key factors when the schools were distributed across Sweden. Ski school training was to a high degree contextual, rooted in the local landscapes and the conditions available there. Nature, in the sense of an existing geographical context, was an important ingredient in the training of ski school athletes, and the schools were located where the Swedish Ski Association considered the training landscapes as excellent for cross-country skiing. Throughout the article, I will refer to the local landscapes and landscapes of performance. While the concept of landscape historically has primarily focused on the visual aspects, I am here considering the landscape as an assemblage of immaterial (writings, tradition, and records of past performances) and material processes (bodily movements such as skiing, running, as well as signs and other physical representations). When I am using the terms nature or natural, it is because it is used in the sources, which in itself reflects how our views on nature has shifted over time and how we today rather talk about the environment.
Though much has changed since the 1970s, the local landscape still plays a significant role. To study at an upper secondary sport school is to inscribe oneself in a continuum of performance at a high level. Given the historical and present importance of such schools for Swedish cross-country skiing, the performance of students at a given age is seen as a rather strong indication of the potential for an elite career. One way to measure such performance is to use standardized tests. Before the ski schools, performance tests for cross-country skiers were mainly conducted by physiologists and focused on skiers in the national team. The training was less influenced by science, younger skiers were rarely subjected to performance tests, and there were no systematic comparisons of performance levels over time. Following half a century of sportification and scientization, many of those tests can now be done indoors in lab-like settings. However, there are much longer records on local outdoor tests. Many of these schools therefore continue to rely on local landscapes in their test regimes, as a complement to standardized indoor roller-ski tests and running tests on treadmills and ski ergometers (i.e., Concept2 SkiErg) outlined by the Swedish Ski Association.

This article deals with specific landscape features for testing at three Swedish upper secondary ski schools: Hallstatstet in Sollefteå, Hovfjällsracet in Torsby, and Stoltjonastestet in Järpen. There are also upper secondary ski schools in Gällivare, Mora, and from 2023 also Ulricehamn. But for the purpose of this article, the focus is on the three schools with the longest tradition of using outdoor tests. To place these schools geographically for those unfamiliar with Sweden, Torsby is located in the northwestern part of Värmland county, close to the Norwegian border (60°8’13″N 13°0’26″E). Torsby is found at 110 m above sea level.

Järpen is also in the western part of the country but further north than Torsby, close to Östersund and also to Trondheim on the other side of the Norwegian border (63°20’56″N 13°27’43″E). Järpen has an altitude of 324 m over sea level.

The third school is located in Sollefteå, a small town closer to the Baltic Sea (63°10’N 17°16′E). The elevation at the base of the Hallsta mountain is about seventy meters above sea level. The following questions are addressed in this paper: How do ski school coaches use local outdoor tests to analyze performance? How is the importance of these local tests articulated, and what roles do history and landscape play in this process?

As the upper secondary sport schools historically have in practice been the only career path to become an elite cross-country skier, and because all pupils are subjected to these tests, they are something that every Swedish elite skier and coach have a relation to and experience of. As such, they are interesting to study to understand what roles the local landscapes have played and still play in the education of elite skiers. The continued importance of outdoor tests ties into a broader discussion of sporting landscapes and their relation to and effect on the environment. In this paper, I argue that the use of local landscapes to articulate what an elite performance is connects the ideas of measurability and scientization to the lingering tradition of natural training. Local landscapes thereby become a mediator between scientific and experiential knowledge about sport performance. This way, outdoor sport landscapes open up for critical reflections on how the environmental sustainability of sport is understood in relation to performance and to the landscapes where training is conducted.
Searching for a Training Plan: Landscapes of Skiing in Archives, Interviews, and Images

The study builds on diverse material, including archival sources from three upper secondary ski schools (Sollefteå, Torsby, and Järpen) and on a combination of material from field visits and semi-structured interviews. In addition, open-access data from the software Strava has been used to describe the test landscapes. Strava is a U.S.-based service for recording and GPS-tracking exercises and sharing them on a social network. It is popular among endurance athletes and is especially common in running, skiing, and cycling.18

As for field visits, they were used in two ways: first and foremost, to identify elements of articulation on site, such as signs, maps, and other features marking the importance of the test landscapes. Second, also as a means of experiencing the actual test. This autoethnographic dimension will not be used as an empirical base for analysis but was still integral to my ability to formulate questions for the coaches and to understand their answers about the tests. Having personal and experiential knowledge of the different parts of the test course, the feelings of exhaustion and lactate acid in arms and legs, sparked my historical imagination. Not unlike a hermeneutical reading of a text, my reading of the interviews and the landscapes was dependent on my preunderstanding of endurance training, my experiences of performing the actual tests myself, and finally the deeply personal understanding of the level of performance that the time records of the best athletes indicate. It has been suggested that a hermeneutic reading can go beyond the idea of sport as a set of rules that can be understood in isolation, because “those rules are devised within a particular culture and are played by humans embedded in specific traditions.”19 In line with this tradition, performance tests at Swedish ski schools are more than the formal numbers of length, elevation, or records. They are embedded in memories, landscapes, and histories to which access is granted through personal effort.

The interviews were conducted during 2021–2023 with six coaches, two from each school. The interviews were done on-site (in three cases) or via Zoom (in three cases) and departed from the question of what local landscapes meant for the testing and training of skiers at each school. The conversation then developed dynamically in relation to what the coaches wanted to discuss. All interviews were transcribed by the author and then analyzed with a focus on how the coaches talked about outdoor training landscapes and specifically the outdoor tests conducted at their school.

The empirical material is analyzed through the concepts of movement heritage and sportification.20 Movement heritage is a concept that highlights the historical dimension of human mobility and is used in this article to understand how the historical importance of the outdoor test landscapes is articulated. This article also frames the development of testing regimes at the ski schools as both part of, and in some ways an alternative to, sportification. The balance between local outdoor landscapes as a form of heritage for skiers, and the continuous sportification that has led to an increasing use of standardized indoor tests, is therefore discussed.

The blend of local outdoor tests and nationwide standardized indoor tests provides key insights into the historical articulation of the role of landscapes in elite ski performance. While new scientific findings and technological innovations have
enabled more advanced and reliable standardized indoor tests, they have also made the measuring and comparison of local outdoor tests more precise. The continued importance of local landscapes in elite ski education illustrates how the long historical negotiation between natural (experiential) and rational (scientific) training is still vivid, despite the far-reaching sportification of cross-country skiing over the last century. Local outdoor tests can be seen as a literal form of path dependence, where specific landscapes have grown in importance in parallel with long historical records of performance and thus remained important. A chosen path for testing performance has been the site of so many attempts that the data gathered has made it irreplaceable. As manifestations of this long tradition, the local test landscapes have come to form a cultural heritage of sport-related mobility—a movement heritage of massive importance to the community of skiers on a local level, and something that anchors even today’s technoscientific version of cross-country skiing in the outdoors.

The coming section provides a background to the use of performance tests at Swedish ski schools. Then, three specific outdoor tests are introduced and discussed. The article then continues with an analysis of the test landscapes in relation to the theoretical framework of movement heritage and sportification. Finally, the results are discussed in connection to the overarching issue of the environment and sport. The article is concluded with a critical reflection regarding the role of local outdoor tests in relation to a broader sportification of sport landscapes.

The History of Performance Testing at Swedish Ski Schools

When upper-secondary sport schools were introduced in Sweden in 1972, it was a joint initiative from the sports movement and the state. These schools were a compromise to accommodate the increasing need for time-consuming and specialized training for potential elite athletes, while also ensuring that they fulfilled their education. While the schools in theory should focus equally on sport and education, earlier research has shown how the logic of sport performance tends to set the agenda. It started with two schools and eighty students but has since grown and is now a nationwide system with more than fifty schools and about 1,200 pupils. The importance of such schools for the development of elite athletes varies heavily between sports, but for cross-country skiing, it has become an obligatory passage point for anyone who wants to pursue an elite career. There are six ski schools with the status of Riksidrottsgymnasium (i.e., the highest level of sport schools). In addition, there are also regional and local ski schools. After the introduction of upper secondary sport schools, testing quickly became part of the schedule during the 1970s. Endurance tests and strength tests were used in combination with school grades for selecting which skiers to admit to the schools. Once accepted, pupils were subject to performance tests each year to follow up training and measure individual development. The logic behind these tests was manifold. On an individual level, they were used to measure current performance levels and to estimate the potential for future developments. On an aggregated level, test results allowed for comparing groups
over time and to follow up on training models in a longer perspective than month-to-month or even year-to-year. With the combination of standardized indoor tests and local outdoor tests, coaches could establish benchmark times needed to reach the highest level. The correlation between performance in these tests and future athletic ability was, and is still, seen as very strong among both coaches and pupils.

The ski schools in general, and the science-based test regimes in particular, can be seen as part of the general sportification of Swedish skiing. This was manifested by earlier specialization, rationalization of training, standardization, and scientization through scientific tests that all students were subjected to. While the local outdoor tests were established already in the 1970s, more standardized indoor tests were introduced throughout the 1990s and 2000s. Today, all pupils are subject to tests such as 3000-m running on a treadmill or track, roller-ski on a treadmill, various strength tests, and 1000-m SkiErg. These tests reflect an increasing specialization of abilities tested, from general endurance level and \( \text{VO}_{2\text{max}} \), to ski-specific endurance and strength in freestyle/skate and double-poling. As the training of skiers has changed over time and the role of running and classic diagonal skiing has decreased, so too have the testing regimes changed accordingly.

However, the local tradition of outdoor tests remains important, and each school still has its own tests, which they continue to conduct with each new age group. It is now time to introduce some of these tests, and how their importance has been articulated based on their history.

**Hovfjällsrace—Articulating the Roller-Ski Heritage of Torsby**

At Stjerneskolan in Torsby, the most iconic test is the Hovfjällsrace. This seven-kilometer uphill starts at the bottom of the mountain (right next to the main road, E45). From there, it is pretty much all uphill along a small, asphalt road until you reach the top of the mountain Hovfjället. In total, the elevation for the seven kilometers is about 500 m. There is a similar segment on Strava, called Hovfjället climb, but this segment is slightly shorter than the actual Hovfjällsrace. This test has been used by the schools since the early 1970s. Even though external factors such as weather or the quality of the asphalt, roller-skis, poles, and other equipment obviously will impact the performance, it is a fairly standardized test with records kept over several decades. A telling example is that the record time (23:16) is still held by a skier who was a pupil in Torsby in the late 1970s. The women’s record time is more recent and is currently 18:19. That time is lower than the men’s record due to the fact that women ski a little under five kilometers, while men ski seven kilometers. This is motivated by the idea that the physical demand should be similar for the male and female pupils, but it still opens up for a gendered understanding of performance in the test. Such understandings have a long historical background in both physiology and sport and can negatively affect performance. It echoes a gendered understanding of female athletes as less equipped to perform heavy endurance sessions, a trope all too familiar in sport history.
The importance of the Hovfjällsrace is articulated in a number of ways. In the landscape, it is marked through wooden signs at the starting point where the road to the top begins, and by a similar sign at the finish line on the mountaintop. These are physical manifestations of the test, turning this rather ordinary Middle Scandinavian landscape into something with special qualities and importance. As trails and heritage sites are often articulated in this way, the signs at Hovfjällsrace are a form of heritage-making, which elevates the status of this specific landscape.28 There are also immaterial dimensions to this articulation. Explicitly, by mentioning the importance of this race to the pupils throughout their education. Implicitly, by keeping records of results and using these records to define target times to achieve for those who aim at becoming national team skiers.29 The coaches at the school value this test as an important motivator for the pupils, while also acknowledging the potential risks of putting too much emphasis on a specific performance on a given day.

“The historical results can be an inspiration, but also burdening. We stress that it is about individual development, and that this test is just one parameter of many.”30

The test is conducted on an asphalt road, which is a sign of alteration of the natural landscape. However, the topography is what matters here and that is a natural element. Unlike the production of artificial snow necessary for the Torsby Ski Tunnel and the adjacent outdoor ski tracks, the road to Hovfjället requires little additional alteration. It is a road in active use for the alpine ski destination Hovfjället, and the fact that cross-country skiers use the outside of the alpine ski season does not add much environmental impact. Even if the ski school in Torsby has access to a specialized asphalt roller-ski track, an indoor ski tunnel, and outdoor ski tracks with artificial snow, they still conduct a lot of base training in the natural surroundings of the school. The most important test is conducted on a public road up a mountain, a road which has not been adapted for roller-skiing in any way. It is primarily the elevation, which makes it an ideal landscape for training and tests.

We have good use of the ski tunnel, but we also need the really tough uphill skiing. And for that, we use Hovfjället and other mountains in the area. It has actually become more important over time, and we spend more time on that type of high-intensity training now than we used to do.31

Through the many years of roller-skiing up Hovfjället, this landscape has become an important passage point not just for skiers who attend the ski school, but also for other elite skiers. National teams from Sweden, Norway, and several other countries come to do interval sessions here.

It is a perfect slope to conduct tests in, not to steep but steep enough. We have had a great number of world-class skiers there over the years. There is so much history, it has been used since the school opened in the 1970s.32

For the coaches, the landscape and the historical records together elevate this mountain slope to a higher status than any other similar place in the area. And while the landscape (at least in theory) could be replicated, its historical value cannot.
Stoltjonas: The Trail Running History of Järpen

The Stoltjonas test is a 2.1-km uphill run in Järpen. The elevation is 117 m. There is a segment for this test on Strava, which is named Stoltjonastest and has around fifty total registered attempts. The record on Strava is 7.44. As in Torsby, the test in Järpen is articulated through signs and maps. It is marked on a map of the sport facilities, and there are wooden signs at the starting point and at the finish line displaying the name of the test, its elevation, and the course record for men and women, respectively. There are also signs with arrows pointing in the direction from the parking lot to the starting line of the Stoltjonas test. As the test is located on what during the winter is part of the ski track, pupils will pass by the signs many times during their training. Signs and course records are part of the articulation of its importance and link the potential and performance of skiers to this place and to the idea of the natural training landscape.
The coaches in Järpen see the test as an important indicator of potential, as it gives insight into the maximal endurance capacity. They also highlight the long history of the test and how that gives additional weight to the results. Still, they call for some caution when interpreting the performance levels.

“It is an endurance test, and those who are fastest there are often those who are the fastest skiers as well. But it’s still a test of your current shape, not your overall ability.”

Performance in the test is framed as an indication of current shape, but even if there are long historical records dating back at least to the early 1990s, coaches do not actively use the test as a predictor of future success. Instead, they use it to measure each individual’s development. Even though the pupils are aware of the historical records and their peer’s results, performance on a running test is not the same as on skis.

It’s a time, in black and white, but then it should be evaluated. If it’s much worse than expected we try to analyze why, but it is not a valuation of how good or bad you are as a skier.

Even though the coaches do not use Stoltjonas to rank skiers, the fact that they emphasize this over and over could point to a possible difference in the understanding of the test between skiers and coaches. With more than 30 years of continuous testing on the same slope, several national team skiers have passed the test and there is an implicit idea of how much it takes to reach the highest level. Coaches know how the best skiers performed historically, and how they expect every single one of the pupils to perform today.

We see that those who reached the national team have rather similar time and the pupils are aware of what that time is. Still, we think it is important to point out that even if they don’t reach that time during their years at the school, they could still do it when they’re 22. Everyone is not cast in the same mold.

This echoes the words of the legendary Swedish ski coach Gösta Olander, who was based in Vålådalen not far from Järpen, who in the 1940s, warned against the physiological training designed to be a universal model—“what suits one, may not at all suit the other.” The coaches argue for the importance of Stoltjonas and the historical records as an important long-term goal to strive towards. They have had several elite skiers who did not reach the target time during their years at the school but came back and did so later. But in general, there is a correlation between performing well on the test at a given age and succeeding as an elite skier. While the records from Stoltjonas do not date as far back as Hallstatetstet and Hovfjällsrace, its 30-year history is more than enough to accentuate its importance for pupils and coaches alike. Though the general trend at the schools is to measure more in detail, replacing it with an indoor test is not on the agenda.

We try to conduct the test during the early fall, so that it becomes more comparable. Though the weather has an impact, if we compare the results from August each year it should be rather similar. We want to remove as much as possible of that which we can’t control.
With such a logic of performance and comparability in focus, an outdoor test is difficult to motivate. However, when tradition and the idea of mastering the natural conditions are taken into account, a test like Stoltjonas adds something which cannot be tested the same way in perfect indoor conditions. Similar concerns have been raised about the impact of artificial grass on the number of tackles in football. It seems as if the natural training landscape is attributed with certain qualities that cannot be replicated indoors, which links the ski school coaches in Järpen today to the natural training tradition developed by Gösta Olander in nearby Vålådalen in the 1940s, in which the idea of nature had an irreplaceable role for the training of all athletes.

**Hallsta—Trial by Mountain for New Generations of Skiers**

Perhaps the most famous test of all ski-related endurance tests in Sweden, Hallstatestet has made its way into mainstream media on a number of occasions. There is a segment on Strava called Hallstatestet, and it measures 1.67 km and 226 m in elevation. The current record is 7:38 for men and 9:28 for women. Two hundred and sixty-three attempts are registered in Strava but these do not fully represent the importance of the test as not all who do the test register their result in Strava. The test has been in use in Sollefteå since the start of the ski school in 1979 and there are historical records dating all the way back to the first group of pupils. These historical records are well-known by both coaches and pupils at the school, and something that sets a standard for what is needed in terms of performance. Even if today’s skiers in general are not as good runners as their predecessors in the 1970s, the test remains important, and pupils are well aware of both the historical record holders and who is currently the fastest. This shows how the local heritage of skiing, represented through Hallstatestet, is used to inspire new generations of skiers. The geographical context still forms the base for training in Sollefteå. When asked about what role local landscapes play in their everyday practice, one of the coaches says: “It is pretty central. I have worked as a coach for many years, and you must use the best of your local surroundings. It can be complemented with indoor treadmills and other equipment, but never fully replaced.”

During the last few years, in parallel with the rise of a number of top-level skiers from or with a background in Sollefteå, the results of Hallstatestet been discussed quite a lot in Swedish media. One example is when the record time set by Sweden’s currently top male skier, William Poromaa, was beaten by orienteering talent Isac von Krusenstjerna. The new record times sparked reflections in local media about the historical performances and how these make athletes a part of a place-based sport history. Another example was when two of the best female national team skiers—Frida Karlsson and Ebba Andersson—battled for the course record at Hallstatestet. Well-known XC ski expert (and former elite skier), Johanna Ojala, commented on the record-breaking attempt by Frida Karlsson by referring both to its role as a performance indicator, and as a shared experience among elite skiers:

It obviously is a testament to her enormous capacity. All who have gone to the ski school in Sollefteå have done this test, and many clubs and national teams...
have also surely been there. Most national team skiers have been through the
test one way or another.45

The mountain landscape with its natural elevation forms the base for training
and testing. But it is not an unaltered landscape—it is an alpine ski slope where
trees and bushes are cleared. Coaches articulate Hallsta as something that gives
Sollefteå a competitive edge over the other schools.

We have a training landscape which beats most other places. It is good at the
other schools as well, but we are at the top. It is a rolling terrain, the roller-ski
track, the ski stadium, ski tracks, all gathered up there at the Hallsta
mountain.46

The altered landscapes mentioned by the coach are part of what forms the
training landscape, but it is the mountain and the climate that make it all possible.
Without these features, Sollefteå would not be more suitable than any other place to
host the education of elite skiers. The local geographical context—though altered
in several ways—remains a key component for the everyday coaching practice.

Natural Performance: Alternative Framings
of the Comparability of Performance

When local landscapes form the basis for testing performance, this is a classic way
of creating a measurable and comparable test, which could supply data for long
periods. The history of sport and exercise physiology includes both bringing
athletes into the lab to conduct tests there, but also bringing test equipment into the
field to test athletes in the kind of environment where they will compete.47 The
outdoor training landscapes are still the backbone of training at Swedish ski
schools today, and this was certainly the case in the 1970s, which becomes very
clear when looking at training programs from that time. No sign of any explicitly
indoor-based training, but plenty of outdoor variations. Skiing, roller-skiing,
hiking, running, and fishing(!) are among the training forms mentioned.48 The
influences of the natural training philosophy as laid out by Gösta Olander were still
influential.49

New scientific findings and technological innovations have enabled more
advanced and reliable standardized indoor tests, some of which were in use at the
Swedish ski schools already in the 1980s.50 However, the measuring and compari-
son of local outdoor tests have also become more precise, and more accessible, due
to GPS-based technology and new software. It has been argued that while the
presence of scientists is constantly felt in the lab, the perception of athletes as being
tested and evaluated is less evident in the field where the data gathering is
conducted through wearable technologies which the athlete is familiar with.51
Scientists produce a sort of “invisibility” (Johnson 2020), which is an important
aspect to consider in the analysis of the local outdoor tests. They are still tests, but
not in the same way as standardized indoor tests.

The continued importance of local landscapes in elite ski education illustrates
how the long historical negotiation between natural and scientific training and
naturalistic or rationalized skiing is still vivid, despite far-reaching sportification
of cross-country skiing over the last century.\textsuperscript{52} The role of personal, experiential knowledge growing out of a close relationship with local landscapes stands strong, and not just for romantic reasons. The long(er) historical records of performance give the outdoor tests an advantage that modernized indoor tests lack, even though the latter are easier to compare over time due to more stable conditions and less dependence on varying natural conditions.

\textbf{Escaping Sportification Through a Recontextualization of Skiing?}

The use of specific local landscapes that are not primarily designed for running or cross-country skiing indicates a lower degree of specialization than other training landscapes (such as indoor treadmills or asphalted roller-ski tracks). They are, to use a concept from Brian Wilson and Brad Millington, examples of \textit{contextual sport}.\textsuperscript{53} They explicitly build on local geography and conditions, and this is not seen as a problem but as an asset. Standardized tests conducted indoors or in artificial/specialized landscapes are important but not unique for each school, and therefore not easily articulated as a local movement heritage. When doing 1,000-m SkiErg, you compete against the whole world. You can conduct this test in Torsby, Järpen, or Sollefteå, or in Dubai or Brazil for that matter. It is far from a \textit{contextual sport}. However, when roller-skiing up the Hovfjällsrace or running the Stoltjonnastest, you only compete against the chosen few who have been there and done the test. Even if you could find a similar road or path, with similar distance and elevation, it would not be the same test.

The use of local landscapes in negotiation with sportification is not unique to cross-country skiing or Sweden—it has been observed elsewhere such as in the sportification of rowing in South America. But while the Tietê River in Brazil worked as a barrier against far-reaching sportification, the landscapes of performance at Swedish ski schools have been important for some aspects of the sportification process.\textsuperscript{54} They have underlined the importance of comparability and records and the need for specialized tests to measure specific qualities in athletes. However, they have also nuanced the ideas of standardization, as they are place-bound and local rather than standardized and universal. They are, in essence, sportification blended with local geography and tradition. In these landscapes, natural training merges with rational training. They incorporate both the idea of universal testing and comparability over time, and the uniqueness of a certain natural landscape and the individuality of mastering a certain landscapes changing conditions. Sports may be increasingly decontextualized on a general level, but the ski school outdoor tests are an example of \textit{contextual sport} drawing on local geographies. In light of increasing environmental impacts from athletes and hopes for more sustainable sports, these landscapes need further attention. They indicate that the local geographical context still matters in sport and that the personal experience of a unique landscape can sometimes be the most trusted indicator of performance. Mastering the natural conditions has often been lifted as an important aspect of sport, be it in skiing, golf, or anything in between.\textsuperscript{55}

The examples discussed in this article may look provincial to an international audience. What do a few hills in rural Sweden count for in the global discussion of
sport sustainability? But it is precisely the local uniqueness of Stoltjonas, Hovfjället, and Hallsta that is the point here. The ski schools took what they had nearby and used it to measure performance as best they could. With time, these landscapes became important to many skiers and were articulated as a movement heritage. We have seen similar processes of heritagization of mountain landscapes elsewhere, and these cases have in common an adulation of nature in general and specific landscape types in particular.\(^{56}\) Local networks and individual actors, be it in a small countryside town like Torsby or the more fashionable St. Moritz, are important in the articulation of landscapes as genuine places for sport activities.\(^{57}\)

While much of the landscapes of elite ski training have been altered through the use of technology (artificial snow, indoor arenas, etc.), the local training landscapes discussed in this article have rather been objects of adulation. The idea of a preexisting natural training landscape remains a central component in the training of elite skiers. The local training landscapes—once the reason for placing ski schools in rural areas of Sweden—are still important. Cross-country skiing has not been totally decontextualized, despite the far-reaching sportification of cross-country skiing during the last 50 years and despite the test lab becoming an obligatory passage point for anyone who wants to become an elite skier.\(^{58}\) Coaches and skiers still consider running or roller-skiing up a hill one of the most reliable ways to measure current and future performance levels. Anyone can try a 5,000-m indoor test on a SkiErg, and anyone who has tried realizes that a time below eighteen minutes requires a lot of training. But understanding the performance of an attempt in the Hovfjällsrace is not as easily translated. To understand it, one must see the landscape of performance and try it out for oneself. Roller-skiing up that winding mountain road is a rite de passage, granting the athlete (or the struggling academic, in my case) access to the community, which understands what a specific result says about a person’s performance and potential. Through personal effort, new dimensions of the local history are uncovered. In this process, the historical and current importance of the local landscape is underlined. Such landscapes are not easily replaceable, as they carry meaning and value from one generation to the next. It is an intriguing thought that such sporting landscapes are more than historical curiosities and that they could be used to understand not only individual—but also environmental—performance.

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Notes


For the purpose of this article, a key feature of Strava is the so-called *segments*, which are specified stretches on the map where your time is recorded and compared with the result of other athletes. All of the tests discussed in the article can be found as segments in Strava. Segments can be created and named by Strava users and include records on best results in different time periods (all-time, last 30 days, etc.) and by different categories of athletes (men, women, age-group, etc.).

32. Coach A, interview.
34. Coach C, interview.
37. Coach C, interview.
41. Coach E, interview.
42. Coach E, interview.
49. Olander, *Träningsråd för skidåkare*.
50. “Results From tests of Junior National Team Skiers,” 1985, in Åre gymnasium (formerly Racklöfska skolan) archive, Järpen, Sweden.


58. Svensson and Sörlin, “The ‘Physiologization’ of Skiing.”