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WINTER TRAVELERS

Captain Jones's *Treatise on Skating*

Jessika Wichner

Ice skating is a highly popular sport art today. Each winter millions of people are attracted by frozen surfaces and artificial skating rinks. Professional athletes practice on artificial ice all year round and prepare themselves for ice skating competitions. Figure skating as well as speed skating is included in the Winter Olympics because of the high number of professional skaters who practice these disciplines. Historically speaking, speed skating has a much longer tradition than figure skating, which was mainly developed in the nineteenth and twentieth centuries.

Nowadays the longest distance for women during Olympic long track speed skating races is 5,000 meters, while the longest distance for men is 10,000 meters. These long track races have their origin in the long eighteenth-century, when skates were used as a means of transportation in order to cover long distances during the winter months. They were particularly popular in Holland, in Scandinavia, as well as in Britain. This article concentrates on the Dutch and British winter travelers of the long eighteenth-century, their skates and the techniques they used in order to cover long distances.

These winter skaters are not travelers in the narrow sense of the word, but people who often covered very long distances, sometimes more than 100 miles per day, and therefore can be referred to as travelers in a broader sense.

The most important primary source that deals with the art of skating in the eighteenth century, is Captain Robert Jones's *Treatise on Skating; Founded on certain Principles deduced from many Years of Experience: By which that noble Exercise is now reduced to an art, and may be taught and learned by a regular Method, with both Ease and Safety*,¹ published in 1772. Before examining this work more closely, it is best to start with a short overview of the history of skating until the eighteenth century.

It is unknown when and where skates were used as a means of transportation for the first time in history. At the moment scientists presume that the oldest archaeological findings of carved bones from Scandinavia were used for ice skating and are in fact more than twenty thousand years old. Wooden runners were developed in the Middle Ages, whereas metal runners were only manufactured from the fifteenth century onward. The forerunner in the development of metal runners and in the improvement of skates in general was Holland. Due to its numerous waterways, Holland was severely affected by the Little Ice Age which lasted from the fifteenth century until the nineteenth. In order to ensure that neither the communication system nor the trade system came to a standstill during the winter months, skaters used the frozen waterways as an alternative to roadways in order to transport goods and messages over long distances. The Dutch painter Pieter Brueghel the Elder painted a couple of winter scenes which nicely illustrate how the waterways were used by skaters in the sixteenth century. In his painting *The Census at Bethlehem* from 1566 skaters not only carried goods on their backs but also used ice sledges for bigger and heavier items as well.

In order to move more quickly on ice and to maximize on energy expenditure, runners were required with a highly sufficient gliding capacity. As a result from the fifteenth century onward, metal runners were manufactured in Holland and were extremely long in order to provide optimal power transmission. Robert Jones described the Dutch runners as follows: "by reason of their great length, flat and broad surface, they run over rough ice with ease and expedition; their irons are likewise made low,

¹ Robert Jones, *Treatise on Skating; Founded on certain Principles deduced from many Years of Experience: By which that noble Exercise is now reduced to an art, and may be taught and learned by a regular Method, with both Ease and Safety*, London 1772.

consequently not so heavy as the English."² These runners were not only used in Holland but were also exported to other countries as well, Britain being one among them.

The gliding effectiveness of skates was also increased by the methods used for attaching them to shoes. Robert Jones elaborated on the various methods available at the time. He starts by describing how common people use to fasten their skates to shoes, noting that in his opinion, this was not the best method to be employed:

The method which is taken by the common people is so well known, as not to need any particular description; they only make use of buckles, straps, rings, and heel pegs; which method may be well enough for those who continue this diversion for a few minutes at a time, and think skating consists in an awkward shuffling over the ice, for ten or a dozen yards, for they seldom or ever are able to go any great length without falling, or at least being obliged to stop to re-tighten their skates, which by this method of fastening are continually getting loose.³

He also stated that the risk of getting injured was fairly high, and sprained ankles were a common occurrence. In addition, blood circulation to the foot was not sufficient for long-distance skating:

The blood vessels and tendons of the feet are so violently pressed, that a numbness, or cramp, is in general the consequence;... When the shoes are screwed to the stocks, as mentioned in the second method, the skates have no proper play; for, unless the shoes be large, the ankles will run great risk of being sprained by the sudden jerks of the skates; which often happens in going over rough ice if the shoes be too large, the feet will then have so much play, that motion must be irregular and uneasy. (4)

Therefore Robert Jones suggested another method of attaching skates to shoes, which would give the skater a firm stand on the ice and allow him to skate over longer distances without having to re-fasten the straps again and again:

² Jones, *Treatise*, 9.

³ Jones, *Treatise*, 2ff.

All the proceeding methods being defective in some particular or other; I shall now give one both safe and simple, which I have practised for many years, without the least inconveniency. My method is this: Let the skates be prepared with toe and heel straps, as usual: but instead of heel pegs, let the heel screws be made with flat heads, and long enough to go through the heels of the shoes, in which holes must be bored, and the head of the screws sunk even with the leather, to prevent hurting the feet; to guard against which more effectually, let a piece of leather be sewed to the quarter of the shoe, large enough to cover the whole heel, which will defend it sufficiently from the screw. (6f.)

Jones's method of fastening the skates to shoes was very efficient and became the standard method for the next decade.

In contrast to Britain, all social classes in Holland had access to skates in the early modern period, which is illustrated in another of Brueghel's paintings. In *Winter Landscape with a Bird Trap* (1565) it can be observed that in Holland skates were not exclusively used as a means of transportation for goods and messages but also served as a source of recreation and pleasure. Games were played on ice, parents skated together with their children and the first elements of artistic figure skating had already been invented. In Britain skating first became popular in the eighteenth century, when the rising middle class began to acquire skates and gradually over a longer time period, skating established itself as a form of recreational activity. Women, however, were excluded from skating in the second half of the eighteenth century, which Robert Jones criticized in his book:

Skating is calculated only for the male part of our species....I see no reason why the ladies are to be excluded; to object to it as not being hitherto practised, is the effect of prejudice and confined ideas: the same spirit which established the Coterie may make this as fashionable a diversion for one sex as the other. No motion can be more happily imagined for setting off an elegant figure to advantage; nor does the minuet itself afford half the opportunity of displaying a pretty foot: a lady may indulge herself here in a *tête à tête* with an acquaintance, without provoking the jealousy of her husband; and should she unfortunately make a slip, it would at least not be attended with any prejudice to her reputation. (Preface, XIff.)

Women could only participate passively in these winter sports. If they were fortunate, they would be taken around in an ice sledge, which would have hardly been amusing, especially when temperatures were low and it was difficult to keep warm.

Robert Jones's book illustrated how ice skating in the eighteenth century was not only very popular in Holland but also in Britain as well. The book *A Treatise on Skating* not only gave an overview of the history of skating but also an introduction to the art of skating in general. It is the first book of instruction that was ever published in Britain on that topic. It is not a coincidence that *A Treatise on Skating* was published in the latter half of the eighteenth century, coinciding with the period of the Enlightenment. The population's demand for information was high and people tried to satisfy this demand by writing all kinds of treatises on different subjects. Robert Jones remarked in this context: "We have the happiness of living in so enlightened an age, that every thing is now reduced to a system" (Preface, vii). Jones reduces the art of skating to a system, as well. First he described the basic techniques of skating forward on the inner and the outer edge of the runners before he went into a detailed description of the more complex elements that skaters can perform on the ice.

Although Robert Jones emphasized that the skating techniques in Britain differ from those of the Dutch, when it came to long track skating he concentrated on the Dutch techniques:

Skating among the Dutch, is not so much an exercise or diversion, as business and necessity; the nature of their country and the continuance of their frosts make it so; consequently, safety and expedition is all they have to consider....In England, the case is different; skating is used here as an exercise and diversion only; hence an easy movement and graceful attitude are the sole objects of our attention. (10ff.)

In the beginning of his treatise he described the use of the inside edge of the runners and then elaborated on the use of the outside edge. Because of the fact that gliding on one foot is connected with certain coordinating skills, Jones addressed the position of the body first, before he went into a detailed description of how to use the different edges. In order to be able to glide on the ice it is not only necessary to find a firm stand on the skates but to assist the equilibrium of the body by holding the arms and the head in

the right position, too. The arms should be spread out and held tight while the head should have an upright position:

There are, besides these instructions for managing the feet, others as necessary for the head and arms; which in skating must cooperate with the legs. It is remarkable that learners throw their arms about carelessly, or in a wild manner, as if they were catching at something to prevent their falling; which is the very means of throwing them down: the body being supported on so small a base as the edge of the skate, the poise is very difficult to attain, and I believe equal to that of walling on the tight rope, in which it is seen how essential the arms are, in preserving a proper balance; on the same principle, the arms act in skating, serving as a counterpoise when they are moved; and if they are not properly disposed, it will be impossible to stand, on either the out or inside edge, with any certainty....The head should also be held still. (18ff.)

Here, Jones described a couple interesting details that are still valid today. Beginners of skating usually tend to move their arms along with their body instead of holding their arms tight and they tend to look down to their skates and thereby bend their body instead of keeping an upright position that is required for proper skating.

After discussing the body's position in detail, Jones described the use of the inside and the outside edge of the skate. He believed that using the inside edge represented the most natural way of skating: "As most people fall into this manner of skating before they attempt any other, I shall lay down some plain rules, by which it may be learned with ease and certainty in a very short time" (22). Gliding on the inside edge was not only highly popular among eighteenth-century skaters. Today it also represents the preferred position that beginning skaters automatically take. The outside edge is much more efficient for gliding than the inside edge, but it is also much harder to learn. Jones described the position of the inside edge as follows:

When you have learned to stand firm, and to move about, without falling; the method of proceeding, in order to gain the inside edge, is this: supposing you would make a stroke with the right foot, you must, as soon as your foot sets off, lift up the left foot

behind the right, with the toe inclining downwards at about six or seven inches distance from the right heel, and with the fender two or three inches from the ice; this position of the left leg, with the head at the same time turned to the left, the right arm a little bent, and held out on the right side nearly as high as the shoulders, and the left arm held still close to the side, will cause you to make a sweep to the left on the inside edge. This position reversed, will carry you with a sweep on the left leg to the right; in going on the inside edge, keep the instep stiff, so as not to bend on either side. (23ff.)

As one can imagine, gliding continuously on the inside edge is very exhausting. Jones therefore suggested that the skater change from the inside edge to the outside edge and vice versa from time to time:

Travelling on the inside edge is by no means pleasant, nor is it often practised by those who are further advanced in skating: yet it is sometimes necessary, to relieve, when you are tired of going on the outside edge; which though an agreeable motion, and pleasing to the spectator, is fatiguing if continued long without changing to the inside. (24ff.)

But what does he mean exactly when he talks about gliding on the outside edge? He writes:

Suppose a stroke to be made on the left leg; it must be put down on the flat, with the knee bent, the head inclined to the left, the right arm held out nearly upon a line with the shoulder; and the left arm held close to the side: then, with the right foot, impel yourself to the left, by often pressing the inside edge of the skate on the ice; the left foot is not to be taken off: by this method, you will make a sweep, which you must endeavour to increase, by inclining the body to the left; and bearing on the outside edge of the skate, and by gradually increasing your inclination, and turning the head more and more to the left shoulder, you will form a spiral line. (35ff.)

In order to glide efficiently on the outside edge and thereby gain more speed, he proposed to his readers:

To travel on the outside, you must make strokes alternately with both legs: and at every stroke, let the impellent foot be held, nearly parallel to the other, at about twelve inches distance, for about two or three paces; and then brought up suddenly to the other, in order to make a new stroke; the faster you would go, the farther the foot must be advanced in taking strokes.... To travel very fast, the strokes must be made as short, and the curves as nearly approaching to right lines, as possible. (38f)

Jones was of the opinion that this technique was the most efficient way of gliding on the ice although it might take a couple of winters to learn:

This sort of travelling is thought to be more pleasing and expeditious than any other: it is the method which the Dutch chiefly make use of, in performing their long journies, sometimes with heavy loads balanced upon their heads. (37)

As one can see Jones continuously referred back to the Dutch model of long track skating. If the techniques of gliding on the inside edge and on the outside edge were combined, long distances could easily be covered:

That changing from one method of travelling to the other, must give relief, is obvious; and may be proved by any one action of our bodies, which, if continued to a certain time, becomes tiresome, the tone of the muscles and sinews being strained. (26)

An example of a long distance journey on the ice is the report of the Dutch brothers Klaas and Willem Dostindie, who started on a skating journey to cover twelve towns in one day on 29 January 1822. Their report is part of a book that is called *Der Eislauf oder das Schlittschuhfahren ein Taschenbuch für Jung und Alt*, which was published by the German Christian Siegmund Zindel. Klaas and Willem Dostindie got the idea from four skaters who skated from Koog an der Zaan, via Harlem to Amsterdam, Meeß, Muiden, Naarden, Pampus, Monikendam, Edam, Hoorn, Medenblik, Alkmaar and back to Koog an der Zaan in no more than sixteen and one-half hours in 1676. On their journey they covered a distance of approximately 125 miles.

The Dostindie brothers started their journey the other way around. Because the waterway between Edam and Naarden was not completely frozen in January 1822, the brothers took a detour. They had to go to Amsterdam first in order to get to Naarden. From Naarden they skated back to Amsterdam and arrived back to Koog an der Zaan, the starting point of their journey, in approximately twenty-four hours. Their journey took much longer than that of their predecessors. One of the reasons for their longer trip was the detour via Amsterdam but also the frozen waterways themselves. The ice was so bad that they had to take off their skates repeatedly in order to continue their journey on foot.

The report of the Dostindie brothers focuses on the journey itself and does not include a description of the skaters' clothes and the equipment they took with them on their journey. In order to shed light on these aspects of long-distance skating, other sources have to be taken into account. The famous painting *The Reverend Robert Walker Skating on Duddingston Loch* by Sir Henry Raeburn for example depicts the skater with a long coat and a hat. Other contemporary European paintings of eighteenth century skaters show that hats also belonged to the standard outfit of skaters. While British skaters preferred to wear long coats on their winter journeys, most skaters in Holland and other European countries wore tight-fitting hunting suits.



Figure 1: Christian Siegmund Zindel, *Der Eislauf oder das Schlittschuhfahren ein Taschenbuch für Jung und Alt* [Ice Skating: A Handbook for Young and Old], Nürnberg 1825, 71.

These suits allowed the skaters a high level of freedom of movement. In comparison to the long coats, the hunting suits also did not flutter as much in the wind so that skaters did not need to exert as much energy when pushing forward.

Furthermore, some skaters took shoulder bags with them. According to a short description in Zindel's book, these bags were strongly recommended for long-distance skaters, because they tended to skate on their own, and in case of an emergency they needed to be able to help themselves. They were advised to carry a knife and a piece of string in the shoulder bag, because the straps of the skates sometimes broke and could be patched up with those items. In addition it was recommended that long-distance skaters take food with them, which could be stored in the bag, as well.

Most of the long-distance skaters undertook their journeys on the ice on their own, since it was rather difficult to find a suitable skating partner. A person's individual physical condition determines the manner in which he skates and at what speed he skates. It is possible to adapt to the skating style of another skater to a certain degree, but in general both skaters should be more or less at the same skating level if they want to cover long distances together. Apart from the fact that it is difficult to find an adequate skating partner, long-distance skating is not a very communicative winter diversion.



Figure 2: Christian Siegmund Zindel, *Der Eislauf oder das Schlittschuhfahren ein Taschenbuch für Jung und Alt* [Ice Skating: A Handbook for Young and Old], Nürnberg 1825, 41.

Instead skaters have to concentrate on breathing techniques in order to be able to skate at high speeds. Hence, chatting with other skaters while skating was highly unlikely.

The lonely nature of long-distance skating was part of the reason why figure skating developed in the late eighteenth century in addition to speed skating. In figure skating you can either skate on your own, or you can carry out certain artistic presentations together with other skaters.

The repertoire of artistic elements in figure skating rapidly increased. Skaters had always focused on the art of moving forward, but when figure skating developed, skating backward, for example, became more and more important. Robert Jones describes the art of moving backward as follows:

To travel backwards, is rather a whimsical movement than either necessary or pleasant: but as there may be some who wish to attempt it, I will lay down the plainest instructions for it in my power. To make a stroke on the left leg, turn in the toe of the right foot; and press on the inside edge, to force yourself backwards; and lean forwards as much as you can; the same method must be followed for the other foot: this movement requires a great deal of practice; but when you once have learned the method of making strokes, you will be able to go at a great rate.⁴

Although Jones is not very fond of going backward and regards this position as a superfluous one, he admits that it is one of the most difficult moves that skaters can acquire. In his opinion it is the second hardest move to learn, right before cutting the figure of a heart on one leg, which in his opinion is the most difficult figure skaters can do on the ice. In Zindel's book skating backward is also described. Interestingly, it is not regarded as a difficult movement at all but is described as the fourth elementary movement on ice. Between the publication of Jones's instruction and Zindel's book lies a span of roughly half a century, which is not very much, but which shows that skating has obviously improved considerably during that time period.

Jumps and spins, which are an obligatory part of figure skating today, only evolved at the end of the nineteenth century and the beginning of the twentieth century, when skates had improved considerably. At that period in time the shoe was combined with the runner and thereby

⁴ Jones, 62ff.

formed a unit—hence, the modern skate was born. Due to this improvement, skaters' equipment became relatively safe under their feet for the first time in history. The new skates were much stiffer than the runners that were fastened under ordinary shoes, so that more demanding and complex movements became possible. When the serrated front part of runners was invented, it enabled skaters to do jumps on the ice as well, and basic jumps that are part of the standard repertoire of modern skaters were created by people like the Swedish skater Ulrich Salchow, the German Werner Rittberger, the Austrian Alois Lutz, and the Norwegian Axel Paulsen.

It is not a coincidence that figure skating had its origin in Britain. When speed skating was introduced in Britain, people quickly realized that this kind of skating was not really suitable for a country which lacked a wide canal system. Robert Jones writes about this problem in his *Treatise on Skating*. He states for example that the Dutch skate did not prevail in Britain. There, a much shorter skate was developed, which was much more suitable for shorter distances:

I will venture to say, those who have skated in England and in Holland, or have made use of English and Dutch skates, will give the preference to those made after the English fashion: not that it is fair to condemn the construction of Dutch skates, as that nation makes use of them chiefly for travelling; and here indeed they exceed ours;...ours would by no means be proper for travelling, because the irons are short and circular; not above two inches of their surface touch the ice at a time; all our attention is required, to keep the body in an equilibrium on so small a base, which would be almost impossible to continue for any length of time; and the weight of the irons would add to the fatigue.⁵

The new English skates were ideal for figure skating, because the shorter runners allowed the skaters much more flexibility in their movements as opposed to the longer Dutch ones.

In summary, the Little Ice Age was partly responsible for new developments, such as the use of skates as a means of transportation for covering long distances in winter. The report of the Dostindie brothers

⁵ Jones, *Treatise*, 9f.

in 1822 reveals that the skaters could not take the same route as their predecessors 146 years earlier, because parts of the canal system and parts of the open sea were no longer frozen. This represents evidence of the first signs of climate change at the end of the Little Ice Age, which also marked the starting point in the development of figure skating. If one tried to undertake a similar skating journey today, one would hardly succeed in an ordinary winter. It has to be assumed that due to global warming long-distance skating on natural ice, as it was performed in 1822, will soon become a part of history, not only in Holland but overall in Central Europe. There are still a couple of outdoor long-track speed skating competitions in Holland, but the organizers of these events encounter increasing difficulties in carrying out these competitions, because many canals are no longer frozen in winter. In decades to come, we will probably only be able to read about these long-distance skating competitions and journeys making it more difficult to understand the fascination and possibly the motivation of skaters for carrying out such highly demanding and tiring winter journeys.



Figure 3: Christian Siegmund Zindel, *Der Eislauf oder das Schlittschuhfahren ein Taschenbuch für Jung und Alt* [Ice Skating: A Handbook for Young and Old], Nürnberg 1825, 41.