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# Snow, Sport and Style: Winter Sports Clothing – the First Century

Alpine winter sports began to be organised as sporting activities in the 1880s, notably with the founding by British visitors in Switzerland of the toboggan clubs, Davos in 1883 and St Moritz in 1887, a couple of years after the Cresta Run had opened there. At this time there were no clothes designed specifically for winter sports, a situation that changed little until the later Edwardian years. Winter sports men and women improvised with garments brought from home or purchased in the alpine resorts. Winter sportswear worn when skating, playing curling or tobogganing, was based on British country outdoor wear that had made its way into the urban environment as everyday costumes, especially for boys or worn for cycling. Norfolk jackets, breeches, knickerbockers, sack suits (the forerunner of lounge suits and sports jackets), were worn for a variety of activities, work or business as well as sport and leisure and were soon adopted for winter sports.[1] The Norfolk jacket was a practical garment that, according to an essay by fashion historian Christopher Breward, "combined up-to-date and fit-for-purpose functionality with the romantic associations of rugged, manly pursuits and sublime moorland settings." Originally with "aristocratic associations of country estates, by the 1880s it was a middle-class favourite with its practical reinforced, protective

Tweed outer fabric with roomy pockets, which lent it to a variety of outdoor sporting and leisure activities. It readily translated from the moors, golf courses and cycle rides of Britain to the Alps".[2]

Women took part in winter sports, even riding the famous Cresta Run for skeleton toboggans in St Moritz until 1928 when female riders were excluded. Their clothing style usually owed more to fashion than sport. Like men, they had no specialized clothing during the first quarter century or so of winter sports, adapting what was normal winter wear for the period. For women that meant wearing long skirts even when hurtling head first down a toboggan run. The rational dress movement of the late nineteenth century doesn't appear to have had much influence in the winter resorts of the Alps. A popular style was a long, front-buttoned, tweed, gored skirt, sometimes with a front or rear pleat that allowed movement and that could easily be shortened with integrated tapes or buttons.[3] One method of shortening the skirt was with a band of buttons below the waist and corresponding buttonholes at the hem. The garment could quickly be lengthened again when in public view. A band of heavier fabric or leather around the hem of the skirt helped protect it from slush, mud and water and helped hold it down. As well as in the snow, this style of skirt was also a favourite with female cyclists and also worn for golf, tennis, and walking. A woman who visited Grindelwald in 1910 recalled "we had long skirts with buttons down the front and tapes with holes so that we could hitch them up".[4] Falling over and exposing their legs or more was an inherent risk for women taking part in physical activities, especially winter sports.

A skirt that could be shortened wasn't a recent innovation. In the 1860s crinolines worn for ice skating could be hitched up a few inches above the ankle, clear of the feet while their width allowed freedom of leg movement.[5] A heavier band around the hem, fur was popular with skaters, weighed it down although, because of the wide, supporting cage, this wouldn't have been much cover if the skater fell over.

Underwear was therefore vitally important. It had to be warm, preferably made of wool, and women were advised not to wear bright colours which could make quite a spectacular display when the wearer was rolling on the ground after a fall. Bloomers or pantaloons in a dark colour were sensible, both for warmth and to prevent embarrassment in the case of a fall, by covering the lower body, including the legs. Some female to-

bogganists, who adopted the headfirst position of skeleton sledge riders on the Cresta Run, took the precaution of tying several bands of tape or elastic around their skirts to prevent them from billowing up.[6]

Women were recommended to wear Viyella blouses with their skirts, which was a better material to wear for perspiration inducing activities.[7] Viyella was a blend of wool and cotton devised in 1893 and registered as a trademark in 1894, making it the first branded fabric.[8] It was made from 55 percent merino wool and 45 percent cotton in a twill weave by James and Robert Sissons of William Hollins and Company. Viyella was both a fabric and a brand of clothing. Other manufacturers could produce Viyella garments under franchise. What made the fabric particularly suitable for winter sports was not just that it was light, warm, and durable but it was guaranteed not to shrink. As clothes would frequently get wet and need to be dried out after many falls in the snow, having garments made of a non-shrink fabric was a clear advantage.

The layering of clothes was important for warmth and also to keep cool during vigorous activities when a layer of garments could be removed. Underneath the blouse, vests and also corsets were worn, giving the popular "S" shape body of the time. On top, sweaters and tweed jackets, similar to those worn by men, were popular in Norfolk and tailored styles. Tailored jackets adopted from masculine styles were fashionable for women from the 1880s, and were popular for active wear. Men's shirts too would be made of Viyella or a warm flannel.

Hats were almost always worn by males and females both for warmth and for protection from the sun's intense rays, amplified by sunlight reflected from the snow's glistening surface. To protect against this, in the years before effective suntan lotion, women wore veils with their hats.[9] Gloves also had the dual function of providing warmth as well as protection from the sun. Cream coloured knitted helmets lined with flannel were popular with tobogganers, usually males but occasionally worn by females. These had ear flaps that allowed the hat to be worn like a helmet but which could be folded and retracted so that it could also be worn as a pull-on one.[10]

To keep their legs warm and dry, both men and women wore gaiters or leggings while some wore puttees, bands of cloth wrapped around the lower leg. These were items worn back in Britain by farmers and outdoor workers. Photographs show men wearing thigh-length leggings

for tobogganing which women could also wear under their skirts. An advertisement from 1913 shows Fox's improved puttees with a new non-fray spiral, suitable for gentlemen, ladies and children, being worn by a mountaineer, another image from 1921 shows a female ski jumper wearing them and an advertisement in the *British Ski Year Book* in 1923 shows them worn by bobsleighers.[11]

Demonstrating the sporting ethos of public schools, accessories of sashes, badges, regalia, and sweaters bearing motifs, hats and caps were adopted and worn for competition.[12] The tobogganing, skating and skiing clubs provided training and proficiency tests, with badges for learners, as well as competition. The St Moritz Tobogganing Club had its own club badge which was sported on the front of the knitted helmet or on ties, sweaters and jackets. The first bobsleigh teams of around 1900 identified themselves with sashes bearing the team name, motifs on their sweaters or hat bands.

Cross country skiing, as a means of getting around in the snow-covered winters, had been an important aspect of rural Scandinavian life since time immemorial. By the 1880s, skiing and ski jumping were becoming established as part of a healthy, outdoor lifestyle. They were taken up as pastimes and sporting activities by urban residents. Skiing represented a traditional cultural heritage and national identity. Outfits for skiing developed in Scandinavia from the 1880s. Fridtjof Nansen's expedition across Greenland in 1888 was highly influential not just for Norway as the story of his adventure made people across the world aware of skiing. His wife, Eva, a pioneer of women's skiing in Norway, wore a costume based on folk tradition, designed by her husband, with a skirt that only just reached below the knee worn with leggings underneath.[13]

Skiing began to make its appearance in the Alps gradually during the closing years of the nineteenth century but it was a minority sport with only a handful of participants. The British brothers, Charles W. and Edward C. Richardson, pioneered Scandinavian style skiing in Davos and formed the Davos English Ski Club in 1902 which was followed in 1903 by the creation of the Ski Club of Great Britain.[14] No special clothing other than that worn for tobogganing was worn for skiing at that time, but this situation was to change within the next decade as more people took to the sport. Skiers were

"Mrs Maria Lichtenhahn, Arosa before 1918, portrait by C..A. Liner, 1919" (courtesy of F. Lichtenhahn).

advised not to wear too many clothes as considerable exertion was needed to walk uphill, generating body heat, before gliding down.

With railways reaching many alpine communities around the turn of the twentieth century the Alps became more accessible, in a shorter time, for greater numbers of visitors.[15] Faster journey times meant that tourists could come for just a few weeks, rather than stay away from work or business for the entire season. This extended the market for a winter sports holiday to the professional middle class who could not afford to stay away for months.

Popular makes of clothing worn by British winter sports men and women were from the UK brands like Aquascutum and Burberry. John

Emary founded a clothing business in 1851 on Regent Street. In 1853 Emary devised the first waterproofed wool fabric, which he patented as Aquascutum, meaning water shield. In 1900 Aquascutum opened a women's department and their coats were popular with suffragettes. Burberry's was founded when draper Thomas Burberry opened a shop in Basingstoke in 1856. His business began to focus on outdoor clothing in the 1870s.[16] In 1880 Burberry introduced a new, hardwearing, water-resistant yet breathable fabric, marketed as gabardine, in which the yarn was waterproofed before being woven. Burberry's shop moved to Haymarket in London in 1891 and soon had a branch in Paris. Burberry and Aquascutum both designed and sold specially designed ski suits, made of their waterproof fabrics, in the early years of the twentieth century. In 1911 Burberry's was the outfitter for Roald Amundsen and in 1914 for Ernest Shackleton on their Antarctic expeditions, associating the brand with adventure, snow and endurance. Visual evidence of advertisements shows that Burberry's was making ski suits, or "outrigs" as they were called, by 1912.[17] These outrigs for men and women, were designed from the specifications of experts and completely satisfied the exacting requirements of winter sports, claimed the firm's publicity. Perhaps to stimulate business, Burberry's published a book *Hints on Alpine Sports* by Alpine Ski Club and Swiss Alpine Club member, Prof. Frederic Francois Roget, in 1912. This was described as "A handbook of invaluable advice addressed to those ambitious to excel in Winter Sports." This advice included a recommendation to wear Burberry's clothing made of smooth-surfaced, non-crease materials, upon which snow could not lodge. All outer clothes needed to be thickly woven with smooth surfaces to keep out wind and prevent snow from sticking to the cloth.

By the early years of the twentieth century, winter sports men and women could purchase specially designed outfits and equipment in leading stores before they left Britain. Dickins and Jones, the London department store, was producing a dedicated winter sports brochure by 1913.[18] A skiing skirt for ladies was advertised in the catalogue as being made from Oberland Waterproof Cloth, "specially prepared so that snow will not stick to it" on sale at 49 shillings and 6 pence. A cheaper skirt of shrunken tweed was available at 42 shillings. Jackets were made of knitted wool in colours to match the skirts. The following year, 1914,

Gamage's store was advertising itself as London's premier winter sports outfitters. Gamage's advertising, again featuring female skiers wearing skirts, claimed to have foreseen the tremendous growth winter sports would experience. "As each succeeding winter has made a larger number of converts, so have our departments grown in experience and scope until at the present moment there is not a house in London where every single detail of Winter Sports equipment can be procured in such infinite variety or at such economical prices."[19] This was perhaps a sign of lessening exclusivity or, more likely, growing aspiration by association for the majority of Gamage's customers. Gamages advertised its wares in the *British Ski Year Book*.[20] The more up-market Harrod's too had its own winter sport department and in the 1920s the store had an artificial slope with a ski instructor to help customers try out the equipment before buying.

For women, a special ski corset appeared in 1911 but some progressive women were already beginning to wear brassieres and girdles. Women soon began to dispense not only with corsets but with long skirts as well. The *Engadine Express and Alpine Post*, a newspaper produced by and for the English-speaking community included an article entitled "Fashions in St Moritz" in an edition from January 1922.[21] It had this to say on the subject "Skirts do not follow the new tendency of fashion, they remain very short, which from the sportswoman's point of view, is a good thing." Photographs from around 1920 show skiing women wearing shorter, knee-length skirts with thick stockings. Some of them even began to wear breeches, rather like those worn for horse riding, often covered over by a skirt at first for the sake of convention. *The Engadine Express and Alpine Post* noted that some women skiers, tobogganers, and bobsleighers simply wore gaiters with their skirts while others "preferred knickerbockers which, although a little masculine, look very well indeed on young, slender women". With them was worn a *shandail* (sic) or jersey, which fell below the hips covering the upper part of the knickerbockers. These generally, fitted fairly tightly and were therefore very warm. A few women wore what the newspaper described as "fanciful knickerbockers" which were straight and wide at the knee. Gaiters worn with these, made of wool jersey or white cloth, according to the article, needed to be high enough to protect the wearer's knees. Discussions on the suitability of this mode of dress concluded that a woman in trousers lacked the

"Skiers - Mr and Mrs Lichtenhahn, Davos, 1900s (courtesy of F. Lichtenhahn)

grace and beauty of one in a flowing dress. Not just propriety but even moral codes were breached and trousers were banned in some German ski resorts.[22] As well as allegations that they were ungraceful, there was a fear that trousers would de-feminize women by over-stepping gender boundaries. How a skirt-wearing lady, rolling around in the snow after a fall, perhaps displaying her underwear, could be described as elegant was not taken into account. Some women wore breeches but carried a skirt to cover up when back in the resort or in restaurants. A Burberry's advertisement from 1925, aimed at the French market, shows a woman's ski outfit with a short wrap-around skirt that could be removed and worn as a cape while skiing.[23] While fashion magazines asked the heated question "skirts or trousers?" women themselves, especially British and American, showed a clear preference for trousers for skiing.

After the First World War the corset-wearing woman in a long dress of the Edwardian era was transformed into the New Woman with a more natural or even androgynous physique. Short hair styles, trousers and make-up, dispensing with formal methods of address by using first names, jazz and the latest dances characterized the bright young things of the 1920s, some of whom even smoked cigarettes. The Symington side-lacer and other foundation garments provided the flat-chested flapper look.[24] Another big change from that time was the image of the healthy, fit body with a tan. Skiing, with its associated glamour, developed a flapper image.[25] Ski outfits became chic. New designs in ski wear were shown in fashion magazines and catalogues. According to magazine covers, the fashionable woman was one who skied. Newly enfranchised and relatively independent, Tamara Lempicka's 1929 portrait of a young, female skier, entitled St Moritz, epitomizes this look. Paradoxically, skiing was associated with coupling, a way to meet a potential husband, so any independence was likely to be short-lived.

Before the First World War, tobogganing and ice skating had been the most popular winter sports. Now skiing was paramount and lifts and cable cars began to replace the arduous uphill climb. Skiing was spreading through Austria, Germany, France and then in Canada and the USA where new resorts were being created in the Rockies.

The changes in winter sports fashion were not just social or matters of design. From the 1920s fabric technology began to play a bigger role. Writing in 1919, on old and new styles of dress, Will and Carine Cadby remarked that:

It seems but a few years ago in Grindelwald that we watched one or two young enthusiasts out of a couple of hundred guests, go forth clad in woolly jerseys and spongy home-spuns, to return after a morning's combat on the slopes, snow-covered from top to toe. Now all is changed, and even beginners start with clothes of a smooth, closely-woven, snow material, at least as an outer covering.[26]

> Every fall increased the weight of snow that stuck to the clothes, either soaking the wearer or freezing into a solid matted mass. These new snow-resistant garments described were Aquascutum, the gabardine of Burberry's or similar products that had appeared on the market during the previous decade. The

> tweeds and flannels of earlier years were deemed inappropriate by the 1930s because the snow clung to the fabric, making skiers, soaked to the skin, look like snowmen. Skiers needed some kind of wind and snow proof jacket. An elastic band at the bottom of the outer coat would keep out soft snow. Another way of doing this was to tuck the jacket inside the skiing trousers.

Lastex was a two-way stretch fabric devised in 1925 by Dunlop which revolutionized sportswear, especially for women. Lastex freed women from corsets and boning in their underwear, allowing them to wear stretch bras and girdles. In skiing, Lastex was used to produce stretchy cuffs and trouser bottoms from 1931, keeping the snow out and warmth in. Long trousers that could be tucked inside boots now replaced knee-length breeches for men and women.[27] A way of preventing trousers pulling out of the boots was to wear short gaiters or to put the ends inside the boots and hold them there with elastic bands under the sole, a sort of home-made ski pant.

To keep hands warm, skiers needed two pairs of mittens: over-mittens of canvas and another pair of wool to wear underneath, preferably without linings which took too long to dry. Socks too needed to be doubled up with two pairs worn, the outer pair made of water resistant wool.[28] Some sort of cap was vital to cover the ears, peaked for spring skiing to give shade from the sun. Snow goggles, made of celluloid, were another requirement; brown or green were said to be best. As a wide visual field was essential, narrow side frames with little holes in them were recommended, so that they didn't mist up. Peter Lunn recommended Hamblin's full-field snow goggles as advertised in the 1935 *British Ski Year Book*, a publication edited by his father, Arnold.[29]

Skiing became fashionable in the 1930s and the number of clothes specifically designed for the slopes increased. For women the silhouette was long and slender. Incorporating Lastex, improved bra design with cup sizes were available in the United States from 1932, produced by S. H. Stamp and Company and by Warner's from 1937, giving more freedom of movement and comfort for adult sportswomen.[30] Long Norwegian-style trousers with cuffed hems were worn with boxy, wide-shouldered jackets that could be worn over a sweater. Colour was a matter of taste but dark clothes were

said to be warmer, often too warm for spring sun. Wearing plain, dark coloured ski clothing was also a mark of class, worn by elitist skiers who wished to distinguish themselves from the bright colours of middle-class inclusive or package tourists who travelled with tour operators like Thomas Cook and Dean and Dawson.[31] As they were neither wind nor water proof, woollen sweaters were worn under an outer coat. Ski suits for women were high fashion by the 1930s: in Europe and North America, the rich and famous adorned magazines wearing the latest outfits, propagating further the glamorous image of winter sport.

Images of skiers with the fashionable elongated physique typical of the era, some drawn by illustrator Jean Page, adorned the pages of *Vogue* from the 1920s. In the USA *Harper's Bazaar* magazine featured images of skiers, especially after the 1932 Winter Olympics in Lake Placid led to an increase in participation in skiing and following the 1936 opening of Sun Valley in Idaho. This was America's first winter resort, complete with the world's first chair lifts, opened by W. Averell Harriman, chair of the Union Pacific Railroad. Celebrities like Errol Flynn, Rita Heyworth, Lucille Ball, Clark Gable, Marilyn Monroe and Ernest Hemingway were invited there by Harriman to help promote the resort, contributing further to the continuing association of skiing with glamour and status. Some even skied in their films, sometimes with the aid of stunt skiers.

Another essential item getting a mention in winter sports literature of the 1930s was anti-sunburn lotion. Thanks to Coco Chanel popularising the tanned look, in the 1920s bronzed skin became an asset to be desired by those aspiring to a glamorous and healthy lifestyle, despite it being proved in 1928 that UVB rays could cause skin cancer. For those involved in winter sports, with the inherent risk of sunburn, it was also a practical consideration. From the 1920s creams containing zinc oxide, a sun blocker, were used. Peter Lunn remarks that Nivea and Sechehaye face creams had the best reputation but were messy. These products could protect from burning by acting as a barrier to the sun by remaining on the skin's surface rather than being rubbed in. Lunn mentions a new preparation known as Skol, a liquid that dried invisible on the skin.[32] Its advertisements claimed that Skol was 88 percent better than its competitors. The first commercial suntan lotion was Ambre Solaire from around 1935. This was marketed and sold by Eugene Schueller, the future founder of L'Ore-

al. For the first time products promised to give protection from sun burn while still allowing the skin to tan. Austrian chemist, mountaineer and skier Franz Greiter invented a sunscreen in 1938, which he called Gletscher Crème or Glacier Cream.[33] This had a sun protection factor of only 2 so there was still a risk of burning for fair skins. In the 1940s Greiter's product became Piz Buin, named after the mountain where Greiter's own sunburn had inspired him to invent the cream. He went on to develop Sun Protection Factor (SPF) in 1962. Sun lotion allowed winter sports men and women to develop a tan with some protection from burning. It was no longer necessary to wear a protective veil in the snow.

During World War II, fabric and other materials were in short supply. This led to the appearance of a more streamlined look and saw the introduction of the narrow ski pant which required less fabric than the more wide-legged trousers of the 1930s. Although nylon was invented in 1938, most winter sports clothing was still made of natural fabrics; woollen gabardine used for ski wear since the 1900s remained popular. Favourite colours were dark blue, grey and brown with brighter knitwear and trims.

White Stag was the ski wear brand introduced by US firm Hirsch Weis Manufacturing of Oregon who had made clothes for loggers, stockmen and outdoor workers from 1907. They had begun to make ski wear from 1931. Italian designer Pucci designed his first skiwear collection for White Stag in 1948, before going on to establish his own couture brand. Another American sportswear manufacturer, Jantzen, had established winter sportswear as part of its range by the late 1940s with its all-worsted snow-twill Slope Master ski pants with a grip-fit bottom, a self-fabric snow-shield and heel-hold with an elastic stirrup "to hold the pants firmly in the boot and keep snow out".[34] Jantzen also made knitwear and jackets for skiers made of Zelan-treated poplin. The brand was chosen as the official uniform of the 1948 US women's Olympic ski team.[35] By 1951 Jantzen was selling its skiwear products to a French market, advertising hooded anoraks and stirrup ski pants.

The first stretch ski pant was produced by the firm Bogner. Willy Bogner was a champion cross-country skier and designer from Munich who went into the ski wear business in 1932, importing equipment from Norway and designing anoraks. A silver letter B adorned the zippers from 1937 and since 1953 all Bogner brand products have carried the initial.[36]

Willy's wife, Maria Lux Bogner joined him in the business and in a fashion show in 1948 displayed the first stretch ski pants made of a blend of wool and nylon with a strap or stirrup under the heel that held the trouser leg inside the boot. The stretch ski pant created the iconic, sleek ski shape of the 1950s and 1960s. Stretch ski pants soon translated into non-sporting female leisure wear from the 1950s. Female stars and celebrities, like Marilyn Monroe and Jayne Mansfield, helped popularize this casual look.

Another icon of the skier's wardrobe is the quilted anorak or parka. Seatle sport shop owner, Eddie Bauer, patented a quilted goose-down insulated jacket in 1940 in the USA. Bauer designed the jacket, which he called the Skyliner, in 1936 as an alternative to the heavy woollen garments worn for outdoor wear.[37] The quilting compensated for the bulkiness of the material. This garment was not created for winter sports wear but for general outdoor activities, such as fishing and hunting, in the cold of northern America. After the Second World War the quilted jacket was developed for skiers. Klaus Obermeyer, a Bavarian ski instructor and former wartime aeronautical engineer, who moved to Aspen in the US in 1947 is credited with the making and wearing of the first quilted ski jacket with insulating layers in 1948.[38] The story goes that he had no coat warm enough for the snowy conditions in Aspen and he claimed that pupils in his ski school often gave up because of the cold. The innovative Obermeyer made a warm jacket for himself out of a goose-down quilt given to him by his mother. Wearing it he stayed warm all day and his pupils started to ask if they could buy one too. When he began to make more of the garments, which were now stuffed with waste fabric to make the insulation, all of the stuffing fell to the bottom of the jacket. Seams were therefore sewn throughout the garment to hold the insulation in place, which created a quilted effect. Obermayer went on to produce innovative ski related products and garments such as jackets with a nylon outer shell and brighter colours with his business Sport Obermeyer. In 1961 he opened his first factory. Obermeyer's innovative product range included hi-tech skiwear, shell jackets, vaporized metal mirrored sun-glasses, nylon windshirts, high-altitude suntan lotion, dual layered ski boots and turtlenecks with elasticated collars.

From the 1950s textile technology introduced more lightweight and waterproof fabrics for ski and outdoor wear, beginning with nylon. By the beginning of the decade the two garments that defined the image of

skiers for the next couple of decades were in place: the ski pant and the quilted jacket or anorak. This look remained the staple image on the ski slopes throughout the 1960s.

The sport of skiing and winter sports holidays became more popular as disposable incomes rose during the decade, creating a wider market for winter sports clothing and accessories. More specialist ski clothing and equipment manufacturers began to appear from this time such as Italian brand Moncler, founded originally by Frenchman René Ramillion in 1952 in Monestier-de-Clermont who soon began to produce quilted down jackets.[39] The French brand Eider was created in 1962 by tailor and recreational skier, Georges Ducruet.[40] As well as specialist outdoor and winter sports brands, renowned couturier designers began to produce ski wear collections aimed at the affluent market, continuing skiing's association with luxury and glamour.

A development of the anorak or quilted jacket came in the 1970s when the padded or puffer jacket made its appearance. By this time almost all skiwear was made of synthetic materials, bright, primary colours were fashionable. Trousers made of similar waterproof material to jackets replaced stretch ski-pants for skiing. Salopettes, bib and brace style trousers with separate padded jackets or all-in-one jumpsuits became popular. For recreational skiers who only skied on holiday, a separate jacket was more practical as it could be worn as a coat when not skiing.

The French World Champion skier Jean-Claude Killy, launched his own stylish and colourful skiwear label, Killy, in 1975. The skier-turned-businessman promoted the brand named after him until 1990.[41] In 1993 Killy was taken over by British company Nevica until it was sold again in 2006, back to the French ownership of skiwear specialists Eider. Bright, fluorescent, neon-coloured fabrics that were waterproof and breathable were produced by Nevica (Italian for It's Snowing), founded by Paul Goldstein in 1978. During the 1990s, Nevica sponsored the British ski team who were kitted out by the brand. In 2010, the Nevica skiwear brand was bought by Mike Ashley of the vertically integrated Sports Direct empire.[42]

By the middle of the 1980s, sportswear was becoming popular as everyday leisure wear. Track, jogging and then shell suits, brightly coloured and block printed, became street fashions, particularly for the young, worn by both males and females. Stretch ski pants became popular as wom-

en's fashion wear rather than for skiing between 1986 and 1988. On the slopes, now made more accessible because of cheaper air fares, package holidays or inclusive tours and the growth of second holidays, the fashion for brightly coloured, block printed styles reflected street leisure fashions. Padded jackets with a high collar, incorporating a roll-up hood and close-fitting cuffs were popular. Matching or contrasting trousers, padded salopettes or jumpsuits were worn. Wearing salopettes or jumpsuits had the advantage that snow couldn't get up the skier's back, although visits to the bathroom could prove difficult. Trousers for skiing have a reinforced area on the lower-inside leg to protect against cuts made by the edge of the skis. The popularisation of skiing meant that skiwear became available in chain stores such as C&A in Europe as well as the more up-market department stores and specialist sports outfitters.

Over the decades, especially since the 1970s, synthetic materials such as nylon and polyester were used more and more, making skiwear warm, colourful, stretchy, lightweight, breathable, wind-resistant, waterproof and quick drying. Gore-Tex, a fluoropolymer fabric, both breathable and waterproof was invented in 1969 by L. Gore and Associates.[43] Although it has many uses it is best known for its use in outdoor clothing and was soon adopted for use in ski wear. Toray's Entrant, on the market from the early 1980s, is not only waterproof but has multi-directional stretching properties.[44] Sympatex began manufacturing in 1986. ICI's Tactel was on the market by the mid-1980s.[45] Nikwax Analogy used by the brand Paramo is another waterproof, breathable, lightweight fabric devised in the 1980s, able to repel water at the same time as allowing water vapour from perspiration to escape, a process known as moisture transportation or wicking.[46]

Columbia, a company founded in the USA in the 1930s, began producing a brightly-coloured 3-in-1 jacket in 1986, which it named the Bugaboo.[47] The Bugaboo consisted of an outer OmniTech waterproof jacket with a zip-in fleece insulation layer inside. It could be worn combined as a warm jacket but could be separated to be worn as a shell jacket without the lining or as just a fleece. Similar designs were produced by other manufacturers.

In the 1990s the trend was towards plainer, less garish colours. From 2000 ski garments have become less bulky due to technological devel-

opments in textiles that mean fabrics can be waterproof, breathable and warm without large amounts of padding for insulation.

Reflecting the increased popularity of recreational skiing, low-priced clothing can now be purchased in some supermarkets such as Sainsbury's in the UK and the international, German-origin store, Aldi.

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