

# The high heeled shoe: an historical survey

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## ABSTRACT

From early Hellenic times to the catwalks of today's fashion houses, the high heeled shoe appears evergreen although its origins remain clouded. The author reviews the recorded history of the elevated shoe in an attempt to establish its lineage. Initially the prerogative of men, high heeled shoes may have had quite pragmatic origins including stability in horse riding as well as an economic answer to shoe repairs. These as well as deportment and status are discussed. In conclusion the author considers the much maligned female "high heels" considering the medical condemnation which despite modern technology has little substance other than perhaps, a misogynistic tirade.

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## INTRODUCTION

The habit of wearing high heeled shoes may have evolved through cultural display directed by sexual selection, but according to Smith & Helms<sup>1</sup> there is no gene that accounts for wearing them. Thus the habit seems to be a culturally mediated trait. The authors believed that women did not consciously dress to please men but instead were driven by much stronger psychological needs to procreate the species.<sup>1</sup> Willing to compromise long-term health for short-term sexual attractiveness, the female wore high heels to draw attention to specific phenotype characters they considered important in attracting a mate. Whether this is true or not, the debate on high heeled shoes continues to rage, and has done since antiquity.

Acceptance of gait analysis equipment has almost guaranteed the crusade will continue in this perennial battle of the sexes. However, the history of the origins of the heel is not clear and may be worthy of investigation if this debate is ever to reach a final conclusion. Irrespective of its origins, there are few practitioners without an opinion of the merits or otherwise of the humble heel. To inform debate the author attempts an outline of the historical development of the heeled shoe. The review relies on previously published works, some of which belong to text and journals no longer available.

## BACKGROUND

Much of the criticism of high heels comes from the belief that they evolved through fashion and degenerate taste. However meaning associated with sartorial signs cannot be entirely divorced from their historical context, and hence other reasons, or combination of reasons, may account for their being.<sup>2</sup> Pragmatic purposes such as stability in riding a horse, the depiction and deportment of status in society, as well as simple practicalities, such as maintaining and mending footwear,

can all arguably be put forward as reasons for the existence of high heels.

What is not in dispute is that true heels, as we understand them today, were not in evidence before 1600. During the 1590s some low heels of wood or cork were produced, but before this leather lifts and cork wedges were used for extra height, which could pitch the wearer quite high. However, it was not until the 20th Century that real stiletto heels were invented. Another main factor, which is not in contention, is that the vast majority of the population from the beginning of time have gone barefoot. Poor people continued to do so up until the 20th Century when mass production and urbanisation forced changes onto the unshod.<sup>3</sup>

## ANTIQUITY

Elevated shoes were known to exist from early Hellenic times, and were worn by men working on hilly terrain. Trade may have been the reason why the costume was later found in Asia Minor, where Persians wore heeled shoes to grip the horse stirrups when riding. Elevated sandals were also discovered in excavations of buried Egyptian cities, which were made with papyri uppers. Most historians believe these were worn by the Egyptian pharaohs as a mark of distinction and a symbol of power and status.<sup>4</sup> Other royals and high dignitaries closely followed the fashion, when approved, but this did not usually involve women, who went barefoot. Later, elevated heels were put to more pragmatic use when Egyptian butchers wore them to stand over the carnage of the abattoir.

Kothornos or cothurnus were worn by Greek actors, and were a type of stage clog which came in different elevations. The shoes helped actors play different characters, and the more the elevation the more powerful the characterisation. Changes to the distribution of the centre of mass meant thespians swaggered rhythmically when on stage. According to historians this movement appealed to the females in the audience, causing them to faint with adoration.

The swaggering gait or salamakides was reportedly adopted by contemporary sex workers who wore elevated sandals that made a distinctive 'clacking' sound. This noise became associated with their libidinous profession. Sexy

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Trendelenbergs were also evidenced in ancient Israel where teenage girls were severely chastised by their elders for adopting a style of walk that reportedly caused their eyes to roll. Respectable women went barefoot. The experience in Rome was more or less the same, with the addition of more robust footwear, which was worn mainly by men. Later, lavish adornment of shoes and sandals was popular but, ostensibly, footwear was restricted to the free citizens of Rome.

The evidence from antiquity would suggest elevated shoes had a functional purpose, i.e. horse riding and hence militaria. The power association may well explain why the costume was readily adopted by the ruling class. Most certainly, affluence and patriarchal societies would ensure power dressing became a male preserve. Albeit going barefoot, indoors, was prevalent throughout antiquity.

## THE DARK AGES

By the end of the Roman Empire, crafts were beginning to be lost as Europe fell into the Dark Ages. Shoes became more popular than sandals and remained the prerogative of nobility. Many explorers and adventurers included shoes from other cultures as gifts to their sponsors when sharing the bounty of discovery. By this means shoe styles were introduced into other cultures and account for the cross fertilisation that was evident in footwear design of the time.

Shoes were very expensive however and would cost the equivalent of what a peasant could earn in one year. Most poor people went barefooted or wore rough clogs or leather slippers, which resembled a bag of leather with little form to its construction.

As the centuries passed, the re-emergence of the crafts took place but the cost of footwear became more prohibitive. It was soon discovered that repairing shoes was easier and cheaper than replacing them (although shoes did not become easily and satisfactorily repairable until they were made so that both sole and heel could be detached and exchanged without disturbing the foot compartment of the shoe). Some authorities believe this may have contributed to the adoption of the heel, i.e. to prolong the life of the upper.

Heels in the shape of low wedges were worn around the second century. By AD 1500 they were as much as an inch and a half in height. Like the Persians, Mongolian horsemen in the 13th Century are believed to have used elevated sections at the heel to grip saddle stirrups when riding. The stability and, hence, accuracy with bow and arrow this gave the horseman was sufficient to make Genghis Khan's armies unstoppable. As they swept across Central Asia they took with them their red wooden heels. This macho image remained a fashion icon in Europe for another 400 years – red heels were worn by King Louis XIV of France.

## THE HIGH MIDDLE AGES

Fashion and style, as we now understand them, most probably had their origins in the Italian city states around the High Middle Ages. Florence and Venice were the centres of trade with the east and this brought affluence and wealth to their citizens. Old crafts were rediscovered and mixed with those

imported from the east to provide sumptuous clothing. The developing merchant class wanted to display their wealth and chose to do it through costume, among other things. The fashion for platform shoes had been seen in Spain but was taken up by the ladies of Venice and Florence.

The chopine or early platform shoe, although short lived in comparison with other designs, was distinctly for court females. The style soon became excessive until shoes 24 inches from the ground were the norm. Women were unable to walk unaided and needed the assistance of a partner or cane to support them during perambulation. Laws eventually banned the shoes because so many miscarriages were reported as a result of falls.

Although no actual evidence exists, many historians believe that an innovative shoemaker may have made an important discovery and hollowed out the forefoot compartment of the platform leaving the heel elevated. This meant the chopine could be worn without tripping.<sup>5</sup>

By the time Catherine de Medici (1519-1589) arrived in Paris from Florence, shoemakers had developed high-heeled pumps. Although these became extremely popular the fashion only lasted 50 years. Worn by the vertically challenged and, particularly, contemporary sex workers, high heeled shoes for women were considered *declassé* and condemned by contemporary medical practitioners.

Late in the 16th Century rounded toe shoes became fashionable but heels for women's shoes were not introduced until the beginning of the 17th Century. Instead, wedge shaped soles were popular, which thrust the foot forward like a heel. Most shoes of the period were leather or heavy velvet and were made in a number of different colours. Most were simple slip-ons but some fastened with lace or buckles at the instep. Thigh length boots were fashionable and were sometimes heavily decorated at the thigh and attached to the doublet by suspenders.<sup>3</sup> Until 1615, shoes might have had their uppers slashed to show the stockings or linings beneath. After this date, decoration was chiefly concentrated on ribbon ties and shoe roses. From 1680 onwards the instep fastening was usually a strap and buckle.

Some Grande Dames of the early 17th Century wore slippers with incredibly high heels, which on closer inspection of the shoe simulated a stilt in the centre of the sole. From 1660, society women wore high heeled pointed shoes with the uppers made of satin or brocade. Bearing in mind that women of a certain class did not venture outside other than in a sedan or carriage, high heeled footwear for women was rarely worn outside.

During the 17th Century, the restoration of the Stuarts to the throne brought the heeled boot to England. By the time King William of Orange came to power he had introduced the jackboot, high quartered and high heeled, with immense breadth for the toes and heavily constructed. Men began to wear fashion boots, whilst ladies continued with pointed toe slippers and, in some cases, high heeled pumps.<sup>6</sup>

## PRE-FRENCH REVOLUTION

According to Broby-Johansen,<sup>7</sup> the first mention of heeled shoes in Scandinavia was in 1605 where the items appeared on a Copenhagen shoe maker's list. During the lifetime of

Catherine de Medici, high heeled shoes were popular with women but the fashion also caught on with men – Charles II (husband of Catherine de Medici) introduced the French Heel.

Louis XIV (1643-1715) became fanatical about red heels and banned anyone other than the privileged classes from wearing them on penalty of death. The Sun King was vertically challenged (5 foot 5 inches) and may have preferred the borrowed height his 5.5 inch heels could afford him. Dandies of the French Court frequently had their heels painted with miniature rustic or romantic scenes, but the Sun King had famous battles or classical idylls painted on his.

Red was considered kingly and had also been favoured by James I at the beginning of the century. Different shapes were experimented with, including hourglass heels (for men). Also during this time, men's shoes were ornamented with silver buckles. Heels were worn during the 30-Year War presumably to give horse soldiers the advantage of stability in the saddle. Heeled shoes were not known in Northern Europe until 1630.

The Louis Heel was invented by Louis XV (1715-1774) and was splayed at the base with a waisted section, which is still used in modern fashion. He also introduced the white shoe to match his hose, although red heels survived until 1760.

The term 'well heeled' is thought to relate to the habit of the rich towering over the poor. The expression was first recorded in the USA in the 19th Century. W Beadle wrote in the *Undeveloped West* in 1873 'To travel long out West, a man must be, in the local phrase, 'well heeled'. This probably refers to spurs and not heels per se. A variant of down at heel was recorded in England in 1588 and it was common by 1700.

*'A goodman's fortune may grow out at heels'*  
Shakespeare, King Lear, II ii.

In the court of Louis XVI (1774-92), women wore extremely high heels and needed to walk with a stick or companion to support their teetering gait. Shoes for ladies about 1760 were on high spindle heels and had large buckles and rounded toes. By 1780 lachets had become less fashionable and shoes incorporated pointed toes with lower heels.

The new fashion for heeled shoes presented many technical problems for shoemakers. It became difficult to make exact pairs and each heel was unique to an individual shoe. As a result, shoes were straight lasted, and to separate right from left, the soles were made footshaped. Shoemakers found it more economical to have a smaller number of lasts, which could be used for either left or right. Shaped shoes disappeared until the 19th Century, when the development of the pantograph made it possible to make mirror image lasts of quantity.

Before these innovations, shoes and boots had to be 'broken in' and at a time when fashion dictates required heels in excess of 6 inches. Walking was laboured and contemporary reports describe the changes in posture associated with wearing high heels and platforms.<sup>8,9</sup> Many of these were fallacious but none the less it became fashionable to walk with the aid of a cane. A wag at the time made fun of the tyranny of high heels with his couplet addressed to fashion victims.

*'Mount of French heels when you go to a ball  
It is now the fashion to totter and fall.'*

Like lace, high heels and wigs became symbols of elevated social status. Because heeled shoes changed deportment they were worn by men in order to strut powerfully forward, in a mincing gait in which, because of the elevation, they could deliberately look down on their inferiors. The physical appearance of the female body posture was also altered making them appear frail, delicate and vulnerable. Within contemporary patriarchal society these characteristics were considered not only attractive but befitting the station of upper and middle classes. Swift<sup>10</sup> described the modern man as 'the fork shaped individual with narrow legs.' The mincing gait for men became irresistibly fashionable. The out-turned foot was in vogue. This had been a necessity in the time of the Gothic long toed shoe but now became fashionable again.<sup>7</sup>

Women's shoes were often made from silk or linen and were decorated with bows and buckles, with high heels and pointed toes. The heel slanted forward and at one point in time was so slanted it meant the supporting point of the shod foot was midway between the heel and the toe. Movement was slow and deliberate and well off women seldom, if ever, ventured outside the house. According to Broby-Johansen,<sup>7</sup> Casanova described the strange action of many of the ladies when they wanted to move quickly but were prevented from doing so because of their high heeled shoes. They would hoist their crinoline skirts to their chins, bend their knees and hop, kangaroo style, to their destination.

Half way through the 18th Century heels became lower and shoes less pointed. In 1780, heels became even lower and by 1790 many people were wearing a flat sandal. Prior to the French Revolution, contemporary medical reports described the changes in posture associated with wearing high heels. The medical profession's 'gaze' was firmly directed away from men but transposed to women. Women of distinction however tended to wear heel-less pumps and some authorities believe this medical tirade was a veiled attempt to moralise.<sup>8</sup>

## THE 18TH CENTURY

Charles Edward Stuart, (1720-88), or Bonnie Prince Charlie, led the rising of 1745, which ended in defeat at Culloden Moor in Scotland. Charlie had been exiled in the French court and took with him to Scotland the French style of heeled shoes.

Throughout this period the height of a man's heeled shoe remained a reliable means of gauging social status. The aftermath of the French Revolution brought hard times and people were forced to concentrate on essentials. Post French Revolution (1793-94) heel heights lowered. The new socialist government was short of money and silver shoe buckles were regularly donated to the cause. The fashion for buckles dwindled. Republican ideals were based on simplicity and in fashion the role model was Greece.

Pseudo Grecian dress was in dramatic contrast to the ostentatious clothing worn in pre-Revolutionary France. New shoes were flat without heels and tied with cross

ribbons. Pucker Muskau noted on a visit to London 'Shoes were as light as paper and were freshly varnished every day.' The once mincing puppets of the Rococo age were replaced with a more natural gait associated with low or no heels. Upper gentry and commoners walked alike. High heels had caused men to mince and women to glide as if on wheels.

The fashion for balls and dancing became popular at the same time as militarism was sweeping the continent. War was always glamorous and Napoleon made it chic. The satirist Jonathan Swift made reference to heels in his book *Gulliver's Travels*.<sup>10</sup> When Gulliver was in Lilliput he was introduced to the rival parties of the Tramecksan (high heels) and Slamecksan (low heels). The groups were distinguishable by the height of their heels and were sworn enemies, never to be seen speaking, drinking or eating together. Although the noble regent of Lilliput wore lower heels than the rest of his court, he was also known to wear one low heel and one high heel, Swift notes, 'which gives him a Hobble in his Gait' – a habit Marilyn Monroe would take up two centuries later. The reference to heel height and particularly the eccentricity of the King may have been a satirical reference to Louis XIV.<sup>10</sup>

## HIGH HEELED BOOTS

Boots were as much a man's fashion as the codpiece. Designed principally for horse riding, boots caused men to swagger when walking, which was considered very macho. During the 18th Century, men's boots became refined and slimmed down with turned down tops lined in brown, contrasting with the black leather of the rest of the boot. The style was based on the boots worn by jockeys for the newly fashionable sport of horse racing. Black and brown were popular for boots worn outdoors, with tans and pale shades popular with the gentry. Men's high heeled boots continued to be fashionable until the middle of the 19th Century when, with improved coach designs and the development of the railways, there was less demand for them as protective footwear.

The slap sole was a fashionable extension added to high-heeled shoes and boots. Working on a similar principal to the Eskimo's snowshoe, the bar between heel and forefoot increased surface contact preventing the shoe from sinking into the mud. Dandified young Englishmen became obsessed with all things foreign and were christened Macaronis by satirists. They used to have iron heel clips fitted to draw attention to themselves as they walked through the streets. Beau Brummell was the beginning of the new age macho dresser who differed from the foppish dandies of before. He tended to wear boots, and would have worn the two most popular styles, namely the John Bull and the boot named after the German, Hesse, or Hessian boot. The Wellington Boot later superseded these styles.

A simple difference between women's and men's shoes at the time was that the latter were made for outside wear.<sup>5</sup> When women travelled they went by coach or, during the 17th Century, by sedan chair. In Versailles, sedan chairs were carried into the public rooms so ladies might alight on clean dry floors. Only with the introduction of metalled roads did women of substance venture outside.

## THE 19TH CENTURY

Men began to reject peacock styles in preference for utilitarian uniforms, which were the precursor of tailored suits. During the 19th Century, men's appearance became increasingly standardised, and by the beginning of the 20th Century, their clothes had virtually become a uniform. Fashion became the prerogative of females and as it was considered effeminate for men to display clothing flair. Around 1800, heels had practically disappeared from female fashion in Europe and shoes were attached sandal fashion by ribbons around the ankle.

By the mid 19th Century the heeled shoe once again became the predominant style. Fashions saw the return of the heel with the introduction of the short boot. Closely buttoned or laced to the mid calf, the boot supported the ankle to reduce risk of sprains. Ladies boots were made from silk, fabric or kid leather.

The 19th Century was dominated by dancing. More than anything else the craze for the public balls affected dress. Jane Austen's novels show the importance of balls in English social life and the introduction of heel-less shoes brought an end to the straight shoe. To combat the wear, which bedevilled the more delicate shoes, a new reinforced cover was required. Patent leather was invented in the 1790s and became very popular on both sides of the Atlantic. At first the heel-less shoes were like pumps but later they incorporated ankle covers to become boots. The style highlighted the gentle contours of the foot, presenting a vulnerable and delicate extension. Heels did make a return by the middle of the 19th Century and the close fitting high button boots became the predominant fashion.

In 1837, J Sparkseshall, bootmaker to Queen Victoria, invented the elastic gusseted boot. It became a prominent style in the West until the onset of World War One. The Balmoral boot was originally designed for Prince Albert, but Queen Victoria took to wearing similar styled boots on her frequent visits to Scotland. The Royal Person's preference to go walking among the hills and glens of Ballater necessitated stout footwear, which ironically did much for the women's movement of the time.

## THE VICTORIANS

Contrary to popular belief the Victorians were not prudish, although many followers of the Protestant faith did take exception to the use of vulgarities in language. During this time, well bred women could not be acknowledged to possess anything as base and potentially carnal as legs. Hence legs were referred to as lower limbs. Even chicken legs were renamed as drumsticks and the breast of the chicken became white meat. The fashion for crinoline became popular and the steel hoops that buoyed the skirt kept it in a permanent state of motion. The slightest pressure at one point raised it correspondingly at the opposite point, often revealing a titillating and tantalising glimpse of the forbidden flesh – the female ankle.

The simple pump disappeared and the heeled ankle boot took over. This fashion was in part in honour of National Hero, the Duke of Wellington. The boot complemented the

crinoline dresses and provided a foot corset enjoyed by men and understood by women.

The introduction of footwear for the masses coincided with mechanised production at the turn of the 20th Century. By 1889 the first heel factory was opened in the USA. As hemlines began to rise, legs, ankles and feet took on greater importance. As the song goes 'a glimpse of stocking was something shocking', so fashion pundits at the time seldom missed the opportunity to make this part of the female anatomy full of promise.

The foot and shoe have always lent themselves to this masquerade. The idea of long legs has an appeal to both sexes. Considered to enhance body contours, shoes and boots incorporated high heels. According to Steele,<sup>10</sup> Victorian fashion expressed neither the social and sexual repression of women nor male perceptions of them as primarily sexual beings. However, Victorian fashion did revolve around an ideal of feminine beauty in which eroticism played an important part. Costume appropriate for a social gathering of peers was more overtly erotic than that worn on the street.

Increased numbers of the middle classes and demand for quality leisure time meant the fashion for the exotic had become established during this time. This clearly affected the design of footwear, which became tight fitting and included heels.

## THE 20TH CENTURY

By the 20th Century mass production of footwear was established, and a ready populace wishing to purchase footwear was keen on high fashioned items. In the 1920s designers rediscovered the sandal and with the addition of heels they became very popular as the glamorous shoe. Beauties such as Mary Pickford and Jean Harlow were seen on the silver screen wearing the latest fashions. Many were well known retifists (a shoe fetishist as opposed to a foot fetishist),<sup>11</sup> and some even admitted to be altocalciphiles (ankle fetishists).<sup>11</sup>

Gloria Swanson had many expensive high heel shoes made for her, including a pair with corkscrew heels studded with imitation pearls. The fashion of jewelled heels was very popular in the 20s and early 30s. Crurofile ('ankle lover')<sup>11</sup> and famous film director, D W Griffiths, often-sponsored beauty contests for feet and ankles with the first prize a 6-month film contract. Runners up, who included a young Joan Crawford, were given high-heeled shoes as prizes.

After the crash of Wall Street in 1929, shoe styles reflected the downturn in the economy and became less frivolous. It was common to read public information broadcasts that outlined the dangers of wearing high heeled shoes, the tone of which was both condescending and patronising to women. There were even public lectures on the topic (High heels and stumbling gait, 1927), the great fear being the causation of flat feet, long since regarded by the medical profession as a stigmatised state. Many of the claims were fallacious and without foundation, being based on moral and snobbish prejudices. The condemnation of heels was probably more to do with the discomfort of women entering the workforce than any sound concern for health.

In the early 30s the fashion for nail painting was rediscovered and the high heeled sandal was shown to encase the entire foot. By the late 30s and 40s daytime shoes that

revealed the toes (toe cleavage) were considered immodest. The Second World War brought shortages of raw materials and consequent decline in the production of fashion shoes. Shoe designers cleverly adopted other materials such as fabric, raffia and plastics and made shoe soles from cork. Shoe designer, Salvatore Ferragamo, popularised the wedge heel and also introduced a metal arch support which meant heeled shoes no longer required toe caps.

By the 1950s the heel of the female foot was considered erotic. War time rationing and shortages had accounted for 'an ideal' heel height (13/4 inches). This was now considered passe and strictly for the squares. Mules became all the rage, and attention was drawn to the naked heel by novel designs. Roger Vivier, a famous shoe designer, made a heel for Marlene Dietrich which included a rhinestone ball. He also made Queen Elizabeth's shoes for her coronation in 1953.

The Stiletto heel was introduced in 1952 and was 4 inches in height. It was on a classic pump with a pointed toe. Known as the 'Cobblers Delight' because the top piece needed frequent replacement, chiropodists were concerned at the associated injuries they could cause. The heels pierced floors and were banned in aircraft and many public buildings. Despite their bad reputation, by the end of the 50s stilettos were the only shoes a fashionable woman wore. High heels were considered symbols of playful defiance and heightened sexuality, and they became the trademark of the naughty girl. Jane Mansfield had 200 pairs!

According to Steele,<sup>12</sup> the height and size of shoes have erotic connotations. High heels were considered to make even the average bottom look more pert, round and trim. Buttocks protrude by 25% just by wearing ankle breakers.<sup>13,14</sup> Effects on the posture have been studied. The change in the body's centre of mass causes the back to curve, breasts to jut forward, the buttocks to hike up and the legs to look long and sexy. The calves and ankles appear shapelier and the arches heave from the shoes to capture a high arched appearance. Psychologist Lloyd-Elliott in his book, *The Secrets of Attraction*, described the length of the leg as a strong arousal signal albeit the actual length is in itself not as important as the relative length (i.e. when compared to length of torso).

Rossi<sup>7</sup> said that the allure of high heels to some people was because they limited movement and were perceived as part of bondage. Show girls from Le Moulin Rouge and Les Folie-Bergeres in Paris called their shoes 'mes escarpins' (or my heels), and were less concerned with what the shoe looked like than what it could do for their bodies when they danced the Can Can. 'F--- me pumps' were first described by Shelley Winter in her biography when she and Marilyn Monroe were made to wear the highest heels in Hollywood.<sup>13</sup> This was not because of any 'venez y voir' (come hither) purpose, but was the graphic description by Winter, at the end of a long day, when the glamorous sirens throw off their shoes to the exclamation of exquisite relief – because the Studio bosses considered their starlets to be plump and short of talent. The name stuck and designers still refer to the high heeled style by this name.

Cushioned insoles and intricate design were two benchmarks of quality in handmade high heel shoes. Unfortunately this facility was rarely available in mass produced shoes. The fashion heel waned in the 1960s only to be rediscovered a decade later. This time shoes were available in exotic fun

synthetics, which were very popular but left a slightly tarnished image as the fashion for plastic and synthetic furs passed. In the 1980s, designers like Maud Frizon, Manolo Blahnik and Bennis Edwards re-introduced the peekaboo high heeled sandal. The year 1979 saw a return of high heels to the fashion scene.

The leading seller to the youth (14-30) of America was a shoe called Candie's Slide. It was a slip on mule with pencil thin high heels, and sold a remarkable 14 million pairs in its first three years on the market. Heavily advertised through the media many parents tried to prevent their daughters from wearing the racy shoes, which of course meant they sold extremely well. The perfect complement to designer jeans the shoes were popular but not always comfortable. Their sales peaked at \$190 million in 1984, but seven years later the bottom had fallen out the market.

## DISCUSSION

From the review it would appear that the historical perspective of the high heeled shoe has come from a variety of sources. Trade and travel most probably account for the appearance of elevated footwear in different cultures throughout antiquity, although simultaneous development cannot be discounted. The adaptation of footwear to horse riding may seem a logical development, as does the celebration of the warrior caste, by adapting footwear to civilian use. This behaviour seems a familiar pattern in social history and is found to be true for both genders. The cost of footwear, especially prior to mass production in the last century, was prohibitive, and it may be that heels were easier to replace than the shoes themselves.

Being pragmatic, the appearance of a raised heel in a shoe would help in the walking process. To wear a shoe longer than the foot necessitated either an ungainly bending of the knee or lifting the leg higher to give ground clearance. The energy required to walk could be conserved by raising the back of the heel, thus pitching the foot onto the ball and introducing a pivot action which automatically cleared any ground obstacles.

Because armies of footsoldiers needed to move quickly and efficiently, most shoe developments have originated from military adaptation. Hard concrete surfaces make

footwear, for most, the only essential part of clothing for modern existence. The adaptation of the heel seems, in retrospect, to have been a practical convenience.

Historical evidence indicates that high heeled shoes were a male preserve long before they became part of female costume. Criticism of the shoe fashion has always been directed towards the female of the species and this has ultimately occurred at a time in history when female emancipation has been the undercurrent of interest.

Condemnation of the high heel remains popular but remarkably has little scientific evidence to support it, despite the efforts of scientists and modern technology (i.e. biomechanical assessment).

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