

## Wirtschafts Woche

Business Weekly, (Germany)

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## Pink Innovation

hen Michael Schumacher rides the curves in his Ferrari, the tires play a deciding role. The Italian race car driver swears by Bridgestone. Schumacher's brother Ralf who rides with BMW-Williams trusts Michelin. Behind this is a double-sided struggle for exact mix of materials for surface structure and asphalt temperature on the roadway. Formula 1 is lighting the way. That the same thing goes on in the ballet world is something only insiders know.

Backstage in world famous opera houses and in renowned dance schools and academies, a veritable war for the best footwear has broken out. Instead of Michelin and Bridgestone, the combatants this time are Freed, Capezio, and Gaynor Minden. This new pointe shoe, developed with modern technology and materials research, has won over the feet of the dancers. This long-overdue step is considered by some to be a huge scandal. As opposed to Formula 1 and other sports, not everyone in the tradition-rich ballet world is ready to welcome innovation.

Behind the apparent weightlessness of the women who stand on pointe (only female dancers wear pointe shoes), moving about the stage and turning on their own axes in a whirlwind, hides a ritual that has remained virtually unchanged for 100 years. The famous ballerina Pierina Legnani started it all in 1895; with her 32 fouettés en pointe (quick rotations on the tips of one's toes), she changed the world of ballet forever.

Until that point in time, ballerinas wore soft slippers and could at most perform short lifts onto their toes. Pierina had the idea to strengthen her shoes with burlap, pressed paper, and glue - and with that to set a new trend. It wasn't long until all dancers were transforming their shoes in this way to turn more pirouettes and to balance on their toes for longer periods of time. The pointe shoe was born. Ballerinas who were in the major romantic ballet pieces such as La Sylphide, Giselle, or, Swan Lake almost always played passionate and tragic roles as fantastical characters such as slyphs, nymphs, fairies, and elves. Pointe shoes have allowed for new opportunities for dancers to imitate the lightness and delicate appearance of these characters.

Since the beginning of the 20th century, as the legendary Anna Pavlova was entrancing her audiences, the accoutrements for the dancers had remained almost completely unchanged. Each pair of Capezio pointe shoes is elaborately made by hand even today. The major ballerinas recognize the handwork of each shoemaker's individually customized design. The materials are the same as they always have been: satin, with interiors made of burlap, pressed paper, and glue.

The dancers could not just simply put on the complete shoes of their individual makers and still dance properly with them.

ENTREPRENEURS ELIZA AND JOHN MINDEN Ballet shoes, ready for dancing, come in varying sizes and five hardnesses.



Dancers used to stitch long ribbons to each shoe at the ankle and many would darn the point with additional cotton thread so the delicate satin would not tear as quickly. These sometimes bizarrely graceful rituals had to be carried out on each pair of new pointe shoes before they would be ready. This process could last for hours - some dancers would hammer the delicate footwear to make it more supple, others swore by soaking their shoes in warm water or alcohol. Following that, the shank would be broken-in and finally softened.

After these processes, the shoes were ready to wear for dancers with so-called "Giselle" feet - a relatively rare shape of foot where the first three toes are the same length. Most, however, had "Greek" or "Egyptian" feet: because the toes were of varying lengths, the space in the box of the shoe had to be filled painstakingly in order to allow the dancer to artfully and effortlessly balance her whole body weight on the platform - an area of a few square centimeters. Only then were ballerinas in the position to dance artistically and without difficulty.

Traditional pointe shoes maintain perfect strength and form for only about an hour. During performances with long passages, professionals have to change shoes when the first pair wears out. Each dancer in the New York City Ballet uses about 130 pairs of shoes per year. The ballet company has a shoe budget of (US) \$500,000.

This is exactly why it's a wonder that for the past 100 years, no one had tried to reinvent the pointe shoe. Eliza Minden was the one who finally did it. As a young girl, she gathered her own painful experiences with toe shoes at her mother's ballet school in Southport, Connecticut. After her studies at Yale, and after gaining management experience with a dance troupe. Eliza ventured into uncharted territory. "Because dancers

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are artists, nobody had paid any attention to their needs as athletes," said Minden.

An avid skier, sailor, and windsurfer, she got to see for herself how new equipment, materials, and clothing could change and augment an athlete's level of performance. The ex-dancer queried ski boot manufacturers about the newest, shockabsorbing foam materials. She investigated the latest modern fibers. And from textile experts, she learned all about the art of fabrics. Armed with this know-how, she went to work - it would be eight years until the new high-tech shoe was ready to enter into production. Sometimes there wasn't enough money for new prototypes.

This is all in the past. Together with her husband, she operates their business, Gaynor Minden, in a historic residential building in Chelsea, New York. At first glance, the pink satin pointe shoe looks like any other ballet shoe. "Tradition is sacred," says Minden. The revolutionary part is on the inside. It consists of a mold made of synthetic materials and resembles a ladle - the shank and the box are made of one piece of material.

The Gaynor Minden shoe offers two advantages: university studies have acknowledged a lower risk for injury, because overextension of the foot on pointe can be better avoided. Tests proved that the new development was also more durable - the shoes can last up to six times as long as other pointe shoes. Although

they are about 1/3 more expensive than traditional ballet shoes, dancers end up saving a lot of money in the long run. So what's missing? Only the time-consuming preparation ritual: Gaynor Minden ballet shoes are ready to be danced in and can be produced in varying sizes and five different hardnesses.

Eliza Minden knows, no medical and barely any economic arguments count for ballerinas. "Unlike Tiger Woods, ballerinas wouldn't change the brand of shoes

## A DEGAS BALLERINA FROM 1878

It took almost 100 years before anyone tried to reinvent the pointe shoe.



they wear for any amount of money," says Minden. The only thing that counts is the high performance of the shoe when dancing. And so the opinions go back and forth. While amateurs appreciate better and longer-lasting stability, some professionals feel that much security unsettling.

Nevertheless, Minden's shoes are slowly being adopted by the best dancers. Gillian Murphy switched to the innovative shoes at age 15. In the meantime the celebrated ballerina, "with the horsepower of a Mascrati" and whom The New Yorker calls one of the biggest stars at the American Ballet Theatre, has become for Minden what Bridgestone is for Michael Schumacher and Ferrari. Gaynor Mindens are danced in at companies from the American Ballet Theatre to the British Royal Ballet to the Vienna Staatsoper.

The company president has built first for the youth: "There will always some who will convert late, but it's easiest to let young dancers be convinced for themselves." Especially important is her commitment to Europe. Minden has created a European sales center in Great Britain. As choreography becomes more modern. pointe shoes sometimes seem unnecessary, Eliza Minden does not agree: "The Nutcracker is still paying the rent for most ballerinas."

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