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### Retrospective of York professor's mother, a brilliant astrophysicist, starts today

She came to Canada in 1935, a refugee and an astrophysicist with \$2.50 in her pocket. Like many other scientists at the time, she was fleeing the Nazi regime in Germany.

Luise Herzberg landed in Saskatchewan with her husband physicist Gerhard Herzberg, who would go on to win a Nobel Prize for chemistry. Gerhard had secured a position as a guest professor at the University of Saskatchewan.

For decades she toiled in her husband's shadow, but Luise is now being recognized thanks to the hard work and dedication of her son, York Professor Emeritus Paul Herzberg of the Department of Psychology, Faculty of Health. A retrospective of her life and work, *Luise Herzberg, Astrophysicist - A Retrospective*, begins at Preservation House in Toronto today and runs until Dec. 15.



**Left: Luise Herzberg**

"The exhibit is a celebration of life," says Preservation House co-owner Cory Lemos. "These are the histories you don't read about in a history book."

Herzberg has spent the last year helping to organize the retrospective for his mother, who died in 1971 just months from retiring. He says he has long been fascinated by her story.

"I'm struck by all the challenges she had to overcome," says Herzberg, who joined York in 1966.

He provided Preservation House with most of the details, the artifacts and the photos for the exhibit, much of which is based on his as yet unpublished memoir of his mother. He has worked on the biography for the last 15 years, but really devoted himself to the project after retiring from the University five years ago.

It started with a conversation with Sydney Eisen, founder of York's Centre for Jewish Studies. As Herzberg says, Eisen predicted a biography of Gerhard would be written, but the story of Luise would only be known if Herzberg told it.

In writing the biography, Herzberg came across a cache of family letters, most of them written in German. To translate them, Herzberg enrolled at the Goethe Institute and studied German for two years. Those letters provided valuable insight into his mother's life.

But there were other challenges as well. One of them was there were few people left by the 1990s who could fill in the missing pieces of his mother's story. His father, in his eighties at the time, was the guardian of much of her legacy. Herzberg was able to interview his father a number of times before his death in 1999 at the age of 94. What he learned fascinated him all the more.

"My mother was a remarkable woman," Herzberg says.

**Right: Luise Herzberg leaving the University of Saskatchewan with her son Paul Herzberg, well before he became a professor at York University**

Born Luise Oettinger to a Jewish family in 1906 in Nuremberg, Germany, she studied at the University of Göttingen under several teachers including two who went on to win Nobel Prizes, Max Born and James Franck. It is the same institution where she met her future husband Gerhard.



The couple married in 1929. Several years later in 1933, Luise earned her doctoral degree in physics, four months after the Nazis came to power.

"Luise was perhaps the last Jew to receive a PhD in Germany before the war," Herzberg says.

Gerhard was lecturing at the university in Darmstadt at the time. Soon after, the Nazis passed a law banning men married to Jewish women from teaching at any of the country's universities. After much searching, Gerhard was offered a post at the University of Saskatchewan. Germany allowed them to ship books and scientific equipment out of the country, but wouldn't allow the Herzbergs to take more than \$2.50 each with them to Canada.

"It sounds pretty grim, but they had a lot of things going for them. They were both quite fluent in English and they had their brains," Herzberg says.

And although his father settled into an academic life, his mother at first did not.

"She faced a number of challenges in life balancing career and kids, like women today, but in my mother's time it was quite a different story," Herzberg says. "Expectations dictated she devote herself to her children and her husband. She also had other issues as a Jew and a refugee."

Herzberg was born in 1936 followed by his sister Agnes a couple of years later. Then there was the arrival of Luise's parents in 1939.

"Luise's father expected her to wait hand and foot on him. So that was an additional challenge," Herzberg says.

At first, her work took second place to the demands of home and family and society's expectations of her, but the pull of science was ever present. It wasn't, however, until 1959 at the age of 53 that Luise finally broke through the barriers as a female scientist in a predominantly male environment, and the nepotism rules that existed at some research labs, and secured a permanent position at the Dominion Observatory in Ottawa. She went on to analyze data from experiments performed using the first Canadian satellite.



**Left: Professor Emeritus Paul Herzberg**

"I call this her best decade," Herzberg says. "She was with a group of dedicated colleagues and was writing a lot of papers."

Even so, the shadow of her husband and his



work was always there. "My mother's work is still occasionally credited to her husband in error," says Herzberg. "When people thought of the name Herzberg, they thought of my father not my mother. She was always in the shadow of Gerhard Herzberg."

As for Herzberg, he fully intended to follow in his parents footsteps, receiving a bachelor's degree in physics and mathematics from Queen's University and a master's degree in physics from Princeton. At that point, he decided to pursue a different course of study.

"I just found it wasn't for me," Herzberg says.

Instead he went on to obtain his doctorate in quantitative psychology from the University of Illinois. He still intended to do research, like his parents, but found a talent in both writing and teaching. He co-developed a psychology statistics course with York Psychology Professor Ron Sheese using the Keller Plan of teaching, which Herzberg then taught at York for over 25 years. With the Keller Plan students need to master to 80 per cent each of the course modules before advancing to the next, and complete the required quizzes at their own pace.

Another unique aspect of the undergrad statistics course was the use of undergrad students as tutors, rather than graduate students. In 1996, Herzberg was awarded the Parents' Association University-Wide Teaching Award.

"That's about the highest accolade a teacher can get I think," says Herzberg.

Another testament to Herzberg's teaching abilities, however, was a reunion of almost 100 of his teaching assistants he'd had over the years. Herzberg figures he's had about 300 in the 36 years he been at York.

"I've kept in touch with a number of them," he says. "That's really tremendously satisfying."

His mother's retrospective is another accomplishment for Herzberg in his quest to tell his mother's story. He is now waiting to hear back from a publisher. Without his memoir, however, his mother's retrospective would not have been possible.

"Luise Herzberg, Astrophysicist - A Retrospective" is at Preservation House, 461 King St. E, Toronto. Hours are Monday to Friday from 10am to 6pm and Saturday from 10am to 2pm or visit the Web site at [www.preservationhouse.com](http://www.preservationhouse.com). For more information contact Professor Paul Herzberg at: [herzberg@yorku.ca](mailto:herzberg@yorku.ca).

*By Sandra McLean, York communications officer*