Discussion Question Answers
Struggle for Employment: Anti-Nepotism Laws in the Academy

Maria Goeppert Mayer

1. How did the scientist develop an interest in science? What is her educational background?
   - Her family had been university professors for six generations. Her father expected her to continue the tradition since she was an only child.
   - She attended the University of Gottingen for her undergraduate and PhD work.

2. Did her family and teachers encourage or discourage her interests?
   - Maria Goeppert’s father very actively encouraged her studies and wanted her to become a professor.
   - Her future husband Joseph Mayer encouraged her studies and even helped her on her thesis.
   - Maria could not obtain a position in Europe after she graduated and was forced to immigrate to America.

3. How did the scientist’s career change after marriage?
   - Joseph Mayer actively encouraged Maria’s scientific research, but universities would not hire her in the same department that her husband worked in, so Joseph was the primary breadwinner.
   - She was forced to work in the attic of the physics building at Johns Hopkins, where she could teach and research but wasn’t paid.
   - It took several years for her to find a paid teaching position, which was at a different college than her husband taught.

4. What kind of discrimination did she face in the workplace?
   - She was forced into low or unpaid positions because of her married status.
   - She had to work to find schools and teachers that would accept a female student.

5. What sacrifices did the scientist make for her career? For her family?
   - Maria worked hard in many unpaid positions so that she would have access to facilities.
   - She followed her husband wherever he could find a good position, even though she had as much expertise as he did.
   - She asked to work less demanding positions so that she would have time to spend with her children.

6. If the scientist was unable to find employment in her desired field, what other jobs did she take?
   - She was able to find employment only by leaving her home country.
   - She was able to teach physics, but only unpaid work for several years.
   - She taught chemistry, rather than physics, so that her husband could work in the physics department.

7. Did the scientist have role models or mentors?
- Her father, a professor, was a huge influence on her life.
- Max Born, the famous physicist, was an academic mentor.

8. What surprised you most about these stories?
- Answer will vary according to student interests.

Cecilia Payne-Gaposchkin

1. How did the scientist develop an interest in science? What is her educational background?
- Payne’s mother encouraged all of her daughters to go to school, even college at a time when there were few women undergraduates.
- She attended Newnham College, a part of Cambridge University in England.
- She was inspired by a lecture from the famous astronomer Arthur Eddington, and that convinced her to study astrophysics.

2. Did her family and teachers encourage or discourage her interests?
- Payne’s father died when she was only 4 years old, so she was raised by her mother.
- Payne’s mother encouraged all of her daughters to go to school, even college at a time when there were few women undergraduates.
- Eddington and astronomer Leslie Comrie both recommended her for jobs in astronomy, but weren’t able to get her one in England. Therefore, she moved to America to work at the Harvard Observatory.

3. How did the scientist’s career change after marriage?
- Payne-Gaposchkin actually had the higher paying and more stable career, so she remained devoted to her research.
- She lobbied for her husband to get positions and recognition.
- She was told not to give astronomical lectures while she was pregnant.
- She had to care for her children and household while continuing to do research, often bringing the children to the observatory with her.

4. What kind of discrimination did she face in the workplace?
- She could find no position in England because she was a woman.
- She was initially expected not to have a family, because that would interfere with her research.
- After she was married, she often faced censure from outside groups for continuing her career.

5. What sacrifices did the scientist make for her career? For her family?
- Payne had to leave her family in England to find an astronomy job that would hire women.
- In order to keep her job, she had to do research work she found boring rather than the research she personally wanted to do.
- She married Sergei Gaposchkin partly so that he could become an American citizen and stay in the United States (Europe was very dangerous during World War II).
- After marrying, she no longer collaborated with the Russian astronomer she had worked with previously, since her new husband was not welcome in Russia.
6. If the scientist was unable to find employment in her desired field, what other jobs did she take?
   - She was able to find employment only by leaving her home country.
   - She did more of the boring computational work than the exciting research she wanted to do.

7. Did the scientist have role models or mentors?
   - Arthur Eddington, the astronomer who verified Einstein's theory of relativity, was an important mentor.
   - She attended Newnham College because her mother’s relative Dorothy Horner had gone there previously.

8. What surprised you most about these stories?
   - Answer will vary according to student interests.