

Women in physics: Why and why not? FREE

E. O. LaCasce



Physics Today **59** (12), 12 (2006);

<https://doi.org/10.1063/1.4797338>



View
Online



Export
Citation

CrossMark

New low pricing

4K ARS Displex Pneumatic Drive Cryocoolers

.8w @ 4.2K DE-210S

.25w @ 4.2K DE-204S

.1w @ 4.2K DE-202S

Research & OEM
Cryostats

Optical & Non Optical

True UHV (10^{-11} torr)

Low Vibration Interface
(5 nanometers)



www.arscryo.com

Compare
our product
specifications
and our pricing!

ARS
manufactures
the complete
cryocooler &
cryostat

Advanced Research
Systems, Inc.

Tel 610 967 2120

Fax 610 967 2395

e-mail; ars@arscryo.com

Evalyn Gates notes that a student's career decisions may be influenced by cultural attitudes. From my years of teaching and advising, I have seen that the influence of parents on the choice of a career is also a major factor.

In many instances, I saw students pushed by parents to become engineers or doctors, careers that did not fit their interests or abilities. Some I managed to persuade to change; a few changed majors only after failing a physics course.

Unfortunately science professors have little chance to influence students who have been pushed out of science into arts or social studies. I did encourage a few women to defy their parents and major in a science.

Another possible motivator away from physics could be that in many colleges and universities, students must choose the subject of their major upon entrance. Admittedly the sequential structure of courses starting late in the second year can cause scheduling difficulties if a major is not yet chosen. One woman, for example, came into my office in the second semester of her sophomore year and said, "I have a problem. I like physics." We worked out a program for a major, and she eventually completed her bachelor's and PhD degrees in physics.

Too many people today are looking only at the financial gains of a career. After four to six years in graduate school plus at least a year as a poorly paid postdoc, a PhD holder in science can expect an entry-level position to pay about half what a lawyer will make after three years of postgraduate work, and less than half what an MBA will make with two postgraduate years. Furthermore, when a woman is married, a physics degree does not offer much flexibility in finding suitable career positions for both her and her husband in the same vicinity. Fortunately for us some men and women still have become, as I. I. Rabi said, "the Peter Pans of the World. They kept their curiosity."

E. O. LaCasce
Bowdoin College
Brunswick, Maine

In her essay Evalyn Gates argues that women are underrepresented in physics because of gender biases and that our physics community has an obligation to rectify this perceived inequity. She says, "Institutions that award fewer than about 40% of bachelor's degrees to women should be actively investigating to find out why."

A much wider male-to-female discrepancy was reported in the *New York Times* recently. It seems that women

commit only 7% of the murders in New York City. There is one bright spot, however: In the spouse-offing category, women lead men two to one.

Certainly men and women are different. Our forebears who dealt with cows and bulls, roosters and hens, and rams and ewes never questioned such differences. Although gender differences in the intrinsic intellectual abilities important in physics are surely small, if not nonexistent, men and women differ in certain personality traits such as aggression (murderous or otherwise), which unfortunately has some effect on status, even in physics. More important is that in judging their best roles in society, women tend to make different choices from men. The influx of women into medicine and biology rather than physics and engineering likely follows from such differences in interests rather than gender biases.

It is important to reduce illegitimate gender biases in all elements of society. I suggest, though, that the most important bias is found in the structures of the paths to leadership roles. These paths mesh poorly with women's biological rhythms. When I review the wedding announcements in the *New York Times*, I find that attractive and accomplished brides are marrying at an average age of about 30—halfway between menarche and menopause. Thus, among advanced societies, women are properly playing a larger role in leadership, but the birth rate lags behind replacement levels. We are becoming extinct.

I have long been interested in the status of women in science. When I was young, Maria Skłodowska Curie was my hero. At the time of my retirement, I could claim that more women received their PhD working with me than with anyone in the history of Yale physics. And my wife, Eleanor Adair, is a significant figure in her area of environmental physiology. Ellie's career path was significantly modified—mainly delayed—by her raising of our three children.

Rather than work toward quotas that incorrectly assume men and women are equivalent, we had better work toward a more radical end, a reconstruction of our corner of a society currently fitted to male biology so that it better fits that of females.

Robert K. Adair
(adair@hepmail.physics.yale.edu)
Yale University
New Haven, Connecticut

Evalyn Gates advocates a "scientific point of view" for what she calls the problem of too few women in physics.