UCLouvain

FIAL
Un éventail de formations, une multitude d'horizons

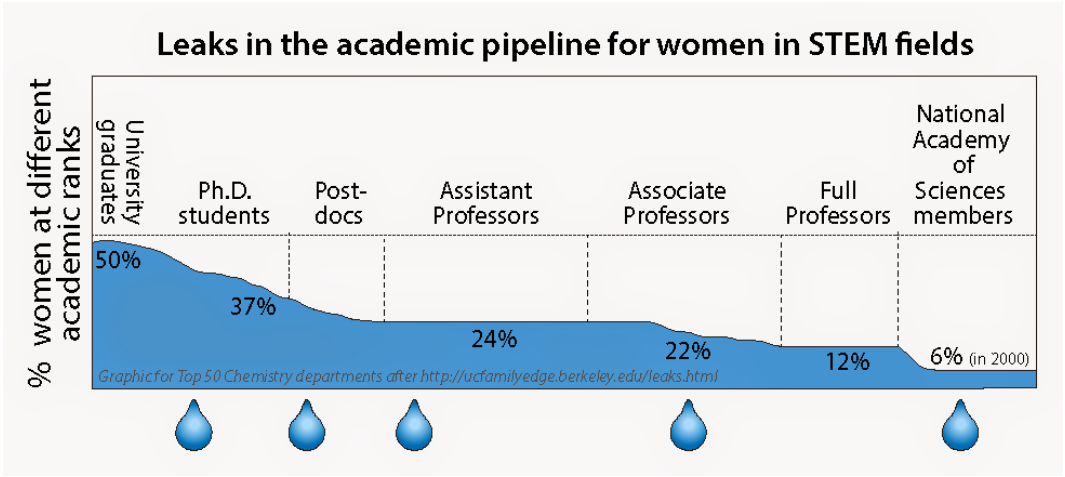
Feminist Philosophy of Science

LFILO2602 – Philosophy of Science
Session 9

(Some) Impacts of Feminist Perspectives

1. Focus on biases in training, hiring, funding, etc.
2. Focus on biases in theories and data collection
3. Active help in crafting new and better scientific knowledge

The Leaky Pipeline



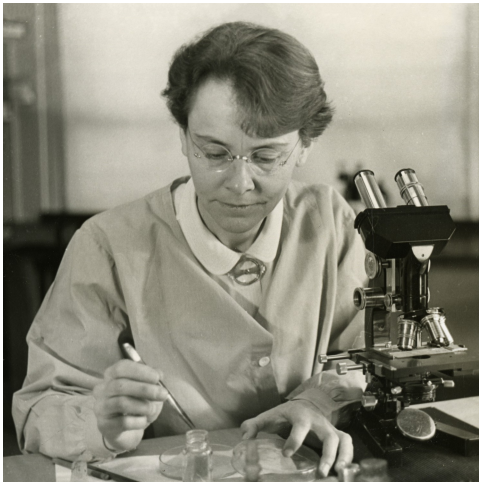
Implicit Bias

Evidence increasingly indicates that people's judgments are affected by factors that not only run counter to what we would express verbally, but are in some way *unconscious* or *inaccessible* to us.

Lots of philosophical questions here:

- Should this lead to a more global skepticism?
- Are we morally responsible for these biases (which are, by definition, at least somewhat outside our control)?
- Should we try to change them?

Barbara McClintock (1902–1992)



Levi-Strauss (1930s)

> The entire village left the next day in about thirty canoes, leaving us alone in the abandoned houses with the women and children.

Reinforcing Gender Norms

MHC-dependent mate preferences in humans

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SUMMARY

One substantial benefit of sexual reproduction could be that it allows animals (including humans) to react rapidly to a continuously changing environmental selection pressure such as coevolving parasites. This counteraction would be most efficient if the females were able to provide their progeny with certain allele combinations for loci which may be crucial in the parasite-host arms race, for example the MHC (major histocompatibility complex). Here we show that the MHC influences both body odours and body odour preferences in humans, and that the women's preferences depend on their hormonal status. Female and male students were typed for their HLA-A, -B and -DR. Each male student wore a T-shirt for two consecutive nights. The next day, each female student was asked to rate the odours of six T-shirts. They scored male body odours as more pleasant when they differed from the men in their MHC than when they were more similar. This difference in odour assessment was reversed when the women rating the odours were taking oral contraceptives. Furthermore, the odours of MHC-dissimilar men remind the test women more often of their own actual or former mates than do the odours of MHC-similar men. This suggests that the MHC or linked genes influence human mate choice today.

Reinforcing Gender Norms

- Women are coy and choosy
- Men are aggressive and promiscuous
- Women only gather passively
- Men only hunt actively

Emergence of Horticulture (~2000 BCE)

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- Before domesticated plants:
  - Women have central roles in collecting of plants for food
- After domesticated plants:
  - Women cultivate plants for food
- All of the explanations of the domestication of plants:
  - Women **aren't involved,** male shamans or political leaders do all the work

Sex Determination

The old model:

- There's a single, "master gene" on the Y chromosome that initiates determination as male.
- The "default" is for a fetus to remain female.

First: Feminist Critique of Theories

- The old model doesn't consider how ovarian development works
- Male processes are automatically assumed to be the more interesting and relevant ones
- Sex isn't just a clear binary between male and female

Second: Scientific Evidence

- Other genes seem to be involved in the pathway
- SRY doesn't even always produce males
- SRY isn't widely conserved across all of the mammals

Third: Feminist Biologists

- The assigning of masculine qualities to SRY makes us ignore contradictory evidence
- The Y chromosome itself is seen as “male” and “aggressive,” and it has to be the “activator” of the pathway rather than a passive participant
- And the X chromosome can’t be contributing anything, because it’s the passive female chromosome

Fourth: Gender Criticism as Standard

Researchers begin absorbing these feminist critiques and acting on them, even without doing so explicitly. And they recognize that gender science *has social consequences*.

> Gender criticism interacted with other factors, including advances in technology, new gene discoveries, and a broader rethinking of 'master gene' theories in developmental biology over the past twenty-five years. Nonetheless, the contribution of gender criticism has been significant.

Unpacking What's Happening

Four ways to think about the existence of these empirical examples (Okruhlik):

- *feminist empiricism* — science is failing to live up to its own ideals; these are biases that have interfered with "good" scientific method
- *standpoint epistemology* — knowledge claims depend in part on who's making them; we thus need to incorporate more perspectives to make *better* science
- *feminist postmodernism* — "accept an irreducible plurality of alternative narratives about the way the world is," deny the possibility of a universally applicable science
- *return to science and values* — analyze these cases in terms of the role of non-epistemic values in science

Helen Longino

Objectivity as a Social Project

- The fact that science is objective *derives from* the fact that it's a social enterprise. And the main feature of this social enterprise is *group conceptual criticism*.
- Science has to (and does) have avenues for critique, shared standards, and community response to criticism.
- But to get hidden assumptions from the science out into the open, *you have to involve lots of different perspectives*.
- Diversity is actually *a requirement* for the objectivity of science.