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# Gendered Innovations

in Science,  
Health & Medicine,  
Engineering, and  
Environment

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What is **Gendered Innovations**?

SEX & GENDER ANALYSIS

Methods

Terms

Checklists

CASE STUDIES

Science

Health & Medicine

Engineering

Environment

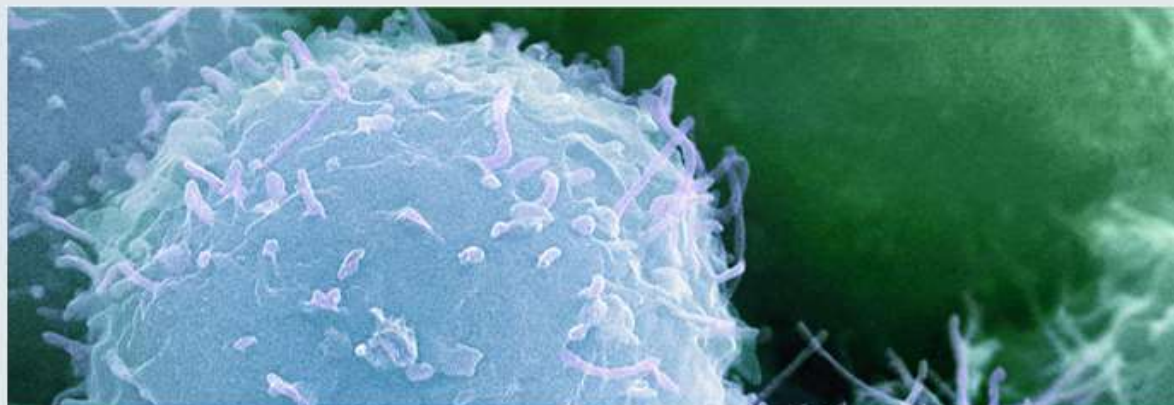
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SCIENCE

## Sex and Gender Methods for Research

Gendered Innovations



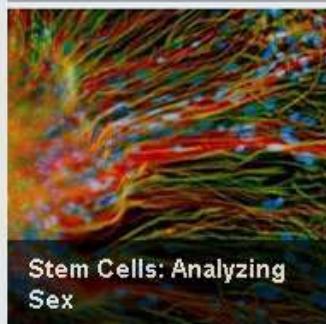
SCIENCE

HEALTH & MEDICINE

ENGINEERING

ENVIRONMENT

FEATURED CASE STUDIES



Stem Cells: Analyzing  
Sex



Osteoporosis  
Research in Men:  
Breaking the Gender  
Paradigm




HIV Microbicides:  
Formulating Research  
Questions & Analyzing  
Academic Disciplines

Why Gendered Innovations?

“Gendered Innovations”  
employs methods of  
sex and gender  
analysis to create  
new knowledge.

# What's new?

- ▶ Gender Variables in Health Research
  - ▶ Other new projects:
    - Algorithms
    - Inclusive Design
    - Robotics
    - Synthetic Biology
- 

# Gendered Innovations...

- ▶ How can we harness the creative power of sex & gender analysis for discovery?

[genderedinnovations.stanford.edu](http://genderedinnovations.stanford.edu)

# Gendered Innovations

- 1) develop state-of-the-art Methods of sex and gender analysis
- 2) provide Case Studies to illustrate how gender analysis leads to discovery and innovation.

# Sex = biological characteristics

- Sex as a Biological Variable

# Gender = cultural attitudes and behaviors

- Gender Variables in Health Research

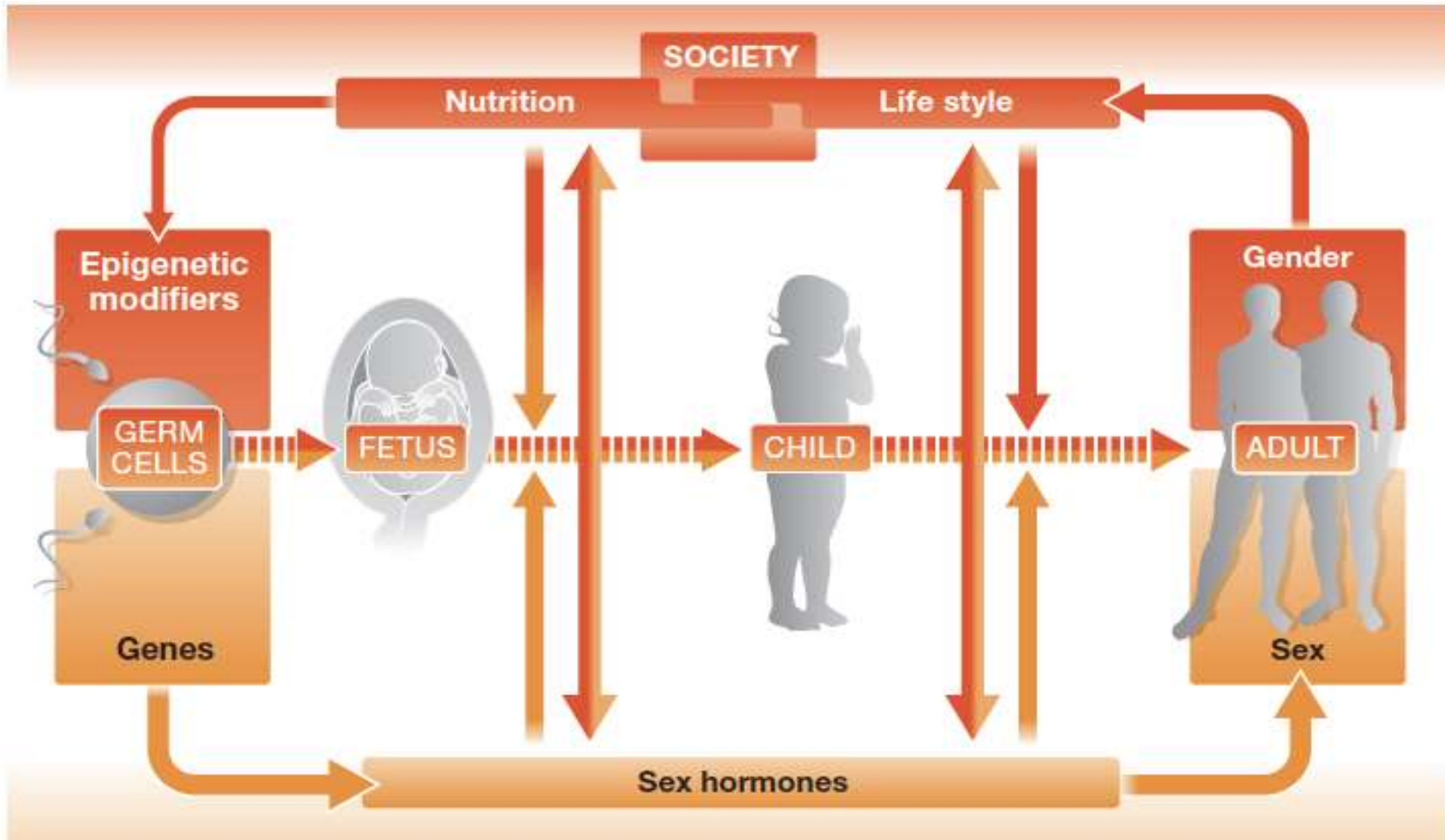
# Question

- Can we reduce gender to variables so that results can be manipulated statistically?



# Sex and Gender Interact

Regitz-Zagrosek, V. (2012). Sex and Gender Differences in Health. *EMBO Reports*, 13 (7): 596-603.



# Gender Variables in Health Research

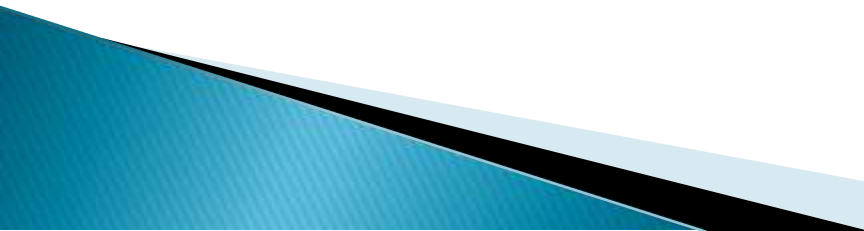
- ▶ Inspiration from Canada

**Sex versus Gender–Related Characteristics: Which Predicts Outcome After Acute Coronary Syndrome in the Young?** By Pelletier, R., Khan, N. A., Cox, J., Daskalopoulou, S. S., Eisenberg, M. J., Bacon, S. L., ... & Norris, C. M. (2016). *Journal of the American College of Cardiology*, 67(2), 127–135.


# Gender Variables in Health Research

- Provides an instrument for measuring gender variables in health

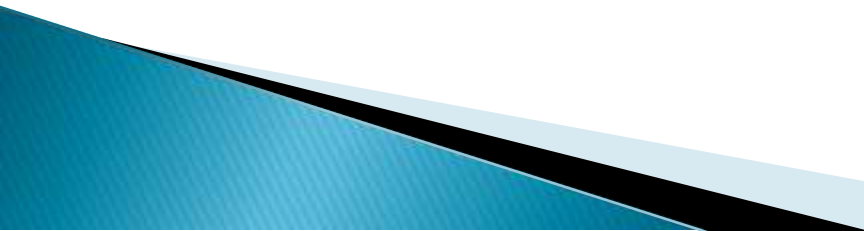
# Seven Relevant Gender Factors

- household primary earner
  - personal income
  - number of hours per week spent doing housework
  - status of primary person responsible for doing housework
  - level of stress at home
  - Bem Sex Role Inventory masculinity score
  - Bem Sex Role Inventory femininity score
- 

# Acute Coronary Syndrome (aged 55 and younger)

- ▶ No sex difference
  - ▶ Gender matters. Patients with a higher “femininity” score—regardless whether they were a man or a woman—were more likely to experience a recurrence of ACS.
- 

# No longer valid

- household primary earner
  - personal income
  - number of hours per week spent doing housework
  - status of primary person responsible for doing housework
  - level of stress at home
  - **Bem Sex Role Inventory masculinity score**
  - **Bem Sex Role Inventory femininity score**
- 

# Stanford Study

- ▶ Gender Variables in Health Research

# Innovative Approaches

1. To move beyond binary notions of “masculinity” and “femininity.”
2. To capture three dimensions of gender:
  - Norms
  - Identity
  - Relations



# Proposed Gender-Related Variables


## Norms

- ▶ *Responsibility for Caregiving*
- ▶ *Time use*
- ▶ *Occupation*

## Identity

- ▶ *Competitive*
- ▶ *Independent*
- ▶ *Risk-taking*
- ▶ *Communal*
- ▶ *Expressive*

## Relations

- ▶ *Social support*
  - ▶ *Perceived discrimination*
  - ▶ *Quality of family relationships*
- 

# Hoping for results in June

- ▶ Londa Schiebinger, **Mathias Wullum Nielsen**, Claudette Brooks, Mark R. Cullen, Gillian Einstein, John P.A. Ioannidis, **Ineke Klinge**, Hannah LeBlanc, Torsten B. Neilands, **Hee Young Paik**, Diana Peragine, **Louise Pilote**, Judith Prochaska, Stephen Ristvedt, Kierstyn Smith, Yoonju Song, Marcia L. Stefanick

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- ▶ On the Gendered Innovations website, sign up at “Contact Us.”
- ▶ <http://genderedinnovations.stanford.edu/contact-us.html>