Blueprint for the Future: Framing the Issue of Women in Science in a Global Context
A Workshop

Workforce Sex Segregation

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Workforce Sex Segregation

Overview of occupational sex segregation in science at three levels of analysis.

1. Section 1: concepts and tools of occupational sex segregation analysis at the macro or labor market level.
2. Section 2: middle level of analysis
   how the institutional processes of qualification, training, recruitment and retention within scientific careers are impacted by the social institution of gender.
3. Section 3: micro level
   - Debates that surround the concept of "choice."
   - To what extent do differences in the occupational structures and careers reflect choices made by active agents and to what extent are choices constrained by gender as a social institution?
   - How do individuals navigate through scientific careers within these larger contexts?

The Macro Level: Occupational Sex Segregation and Labor Markets

Intentionality - spectrum

•In some contexts: women's work/men's work has been explicitly segregated.

•At other end of the spectrum: segregation as an unintended consequence of choices.

Dimensions of segregation – Metrics are available.

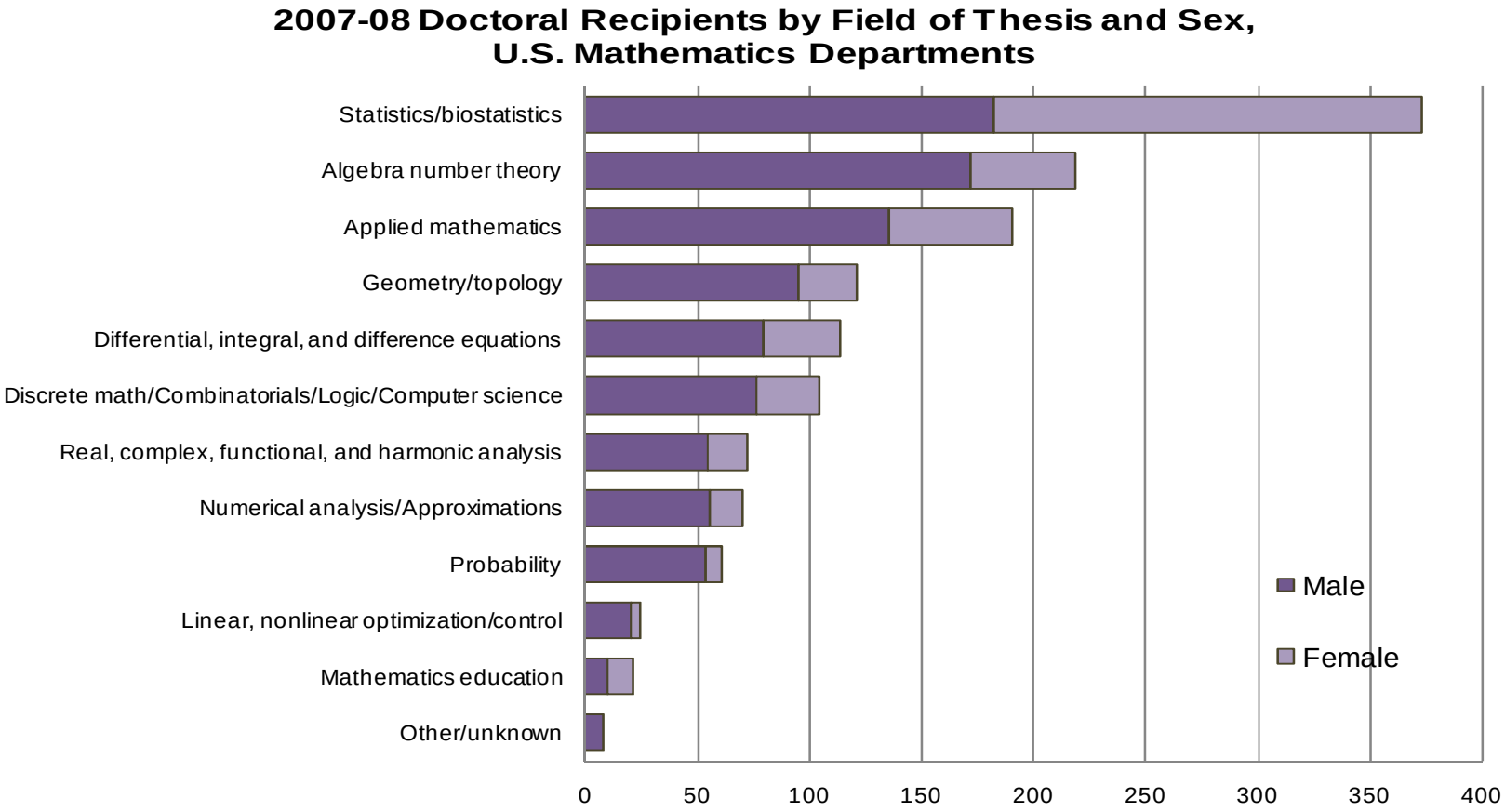
•Horizontal segregation

- E.g. 90 percent of nurses in the United States are women but 90 percent of engineers are men is an example of horizontal segregation.

•Vertical segregation

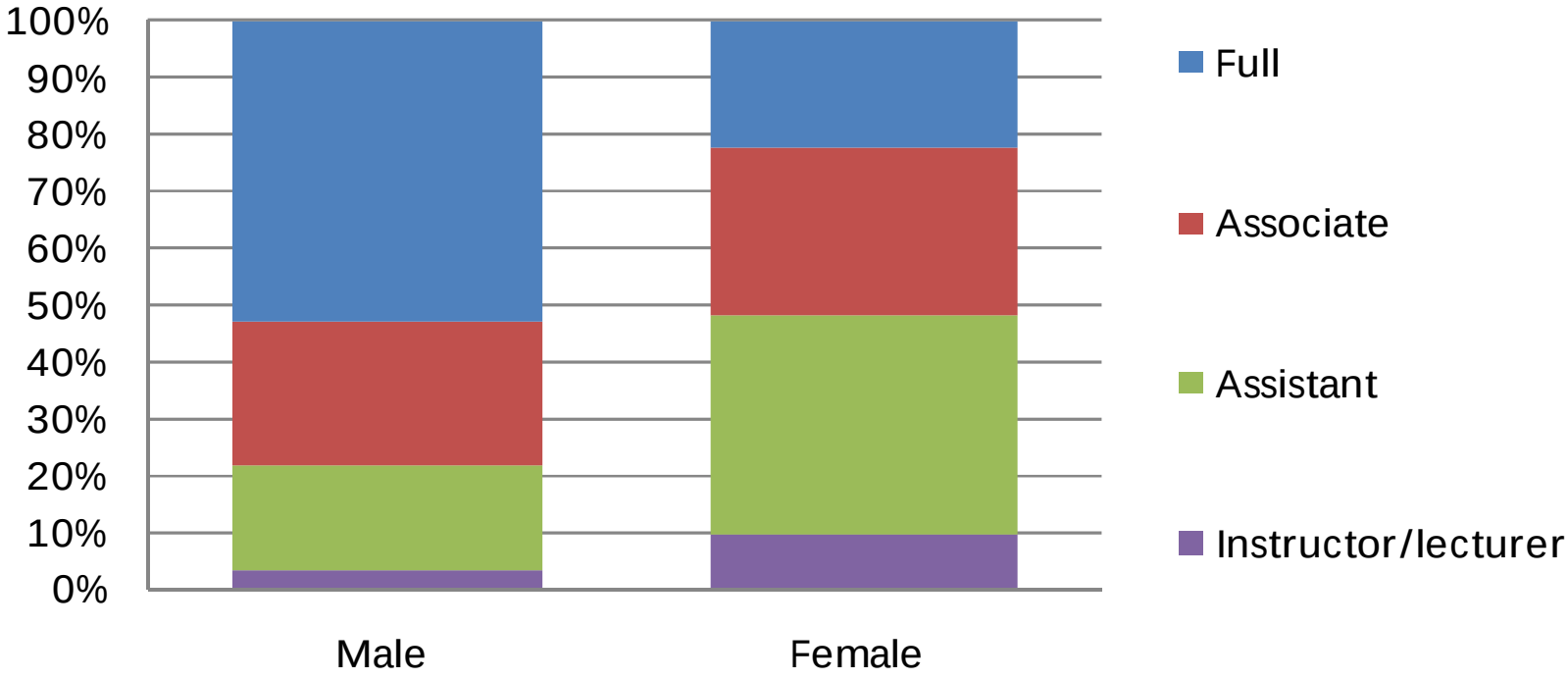
- Looks at a particular occupation, or set of occupations, to see how people from different social groups occupy different levels within that occupation.

Horizontal segregation



Source: author's analysis of data in Phipps, P. J. W. Maxwell, and C. A. Rose. 2009. "2008 Annual Survey of the Mathematical Sciences in the United States. *Notices of the AMS 56 (7)*: 828-843.

Vertical segregation



Source: author's analysis of data in National Science Foundation. 2009. *Characteristics of Doctoral Scientists and Engineersin the United Staes, 2006, Detailed Statistical Tables*, NSF09-317.

Middle Level – Scientific careers: qualification, recruitment, retention and advancement

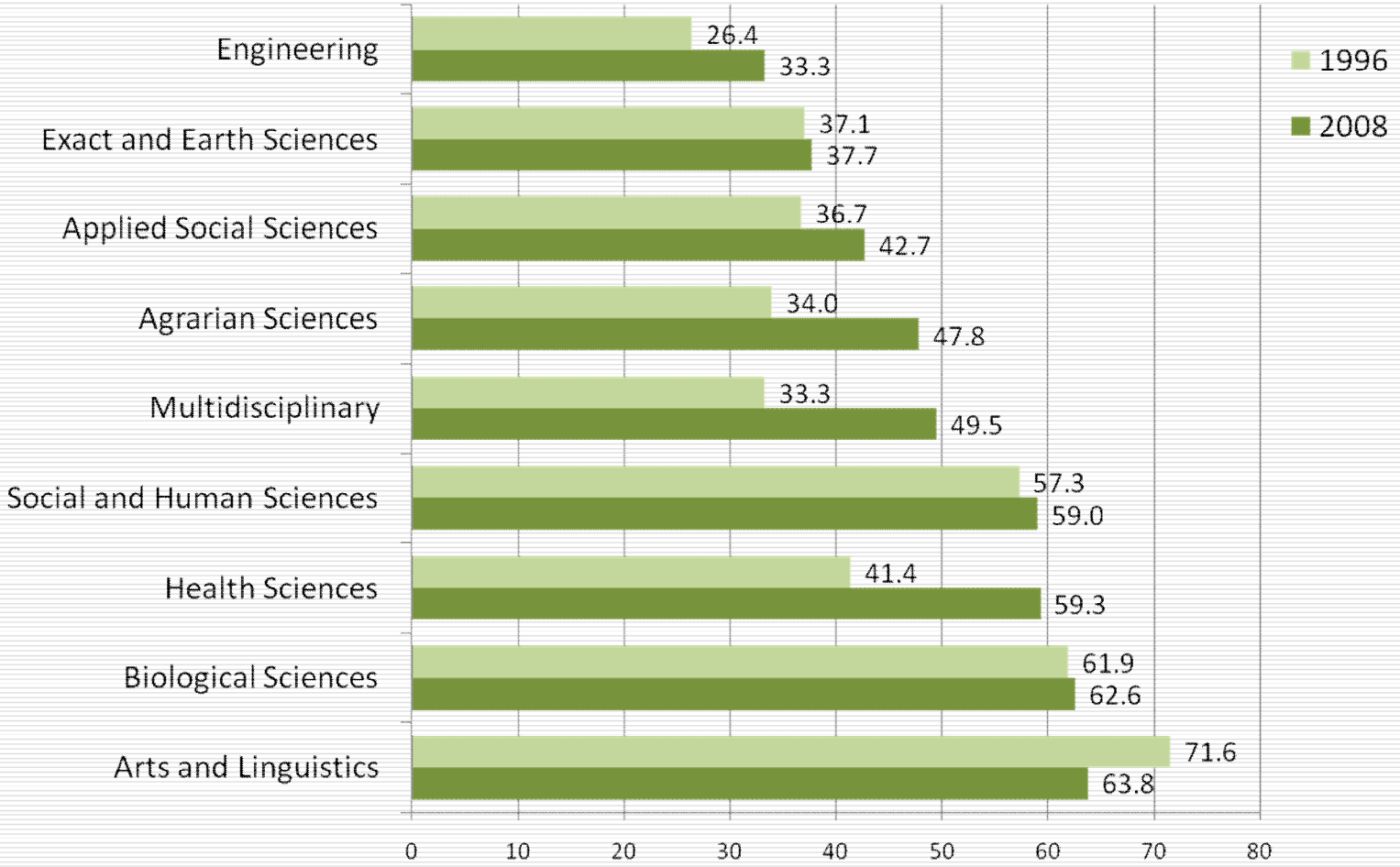
- Underlying factors and processes that lead to the horizontal and vertical segregation analyzed in part one from a macro perspective

- Underlying causes of the gender segregation at the various stages and levels of a scientific career

    - qualification and training,
    - recruitment,
    - retention
    - advancement,

leaking pipeline / the crystal labyrinth / the glass ceiling / work life balance

Brazilian PhDs – Percentage of women by disciplinary areas in 1996 and 2008



The Micro Level: What's a "Choice?"

Key Questions:

•Why is women's representation in some STEM fields so low, and why do the choices about careers and curriculum of individuals continue to be made along gender lines?

•Why are these gender differences more pronounced in the US and other affluent countries than in transitional and developing countries (Charles forthcoming).

Key Issues:

•Tension: individuals are agents YET there are social constraints or channels.

•Available information.

•Situational issues.