

# Disciplinary Societies' Role in Women's Status in Chemistry, Computer Science, and Mathematics and Statistics

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4 April 2011

# Associations

## Foundations

- Georg Simmel – Web of Group Affiliations
- Max Weber – Economy and Society: the importance of organizations grounded in occupations for political action.
- Emile Durkheim – functions of social institutions.
- Karl Marx – the struggles of groups for power.

# Functions of Disciplinary Organizations

## **Functions**

- Socialization of new members
- Enabling collective action by members
- Normative – regulation of the profession, professional practices, ethical guidelines, etc.

## **Mechanisms**

- Conferences
- Research
- Journals
- Community/Networking – web presence, membership directories, new online community technologies such as twitter, linkedin, facebook, affinity groups, etc.
- Policy work, including lobbying
- Scholarships, travel awards, research funds

# Characteristics of Organizations

Geographic Scope: International , Regional , National

Membership Composition

- Academic/Non-Academic
- Students – Graduate and Undergraduate
- Individuals vs. organizations

Organizational Form

- Chapters
- Internal Regions
- Field/subject area sections

Degree of centralization of tasks: extent to which work is done by members  
vs. staff

Governance

# Social Movement Theory – Organizations at the Intersection of Identity and Profession

The 1970s saw the development of a number of organizations for women and minorities in many professions ... including the sciences and engineering

- Association of Women in Mathematics (1971)
- Association of Women in Science (1971)
- Society of Hispanic Professional Engineers (1974)
- National Association of Black Engineers (1975)
- National Association of Black Physicists (1977)
- Association for Women in Computing (1978)

# International Women's Science Efforts

- International Network of Women Scientists and Engineers (INWES)/International Conference of Women Engineers and Scientists (ICWES) ... first ICWES conference: 1964, organized by the U.S. Society of Women Engineers
- Gender and Science and Technology (GASAT, 1981)
- Third World Organization of Women in Science (TWOWS) ... now the Organization for Women in Science for the Developing World (OWSDW) (1989).
- The Center for Arab Women for Training and Research (1993)
- 4<sup>th</sup> World Conference on Women -- Beijing (1995)
- Gender Advisory Board (GAB, 1995)
- L'Oreal/UNESCO "For Women in Science" (1998)
- InterAcademy Council on Women in Science (2004)
- European Platform for Women in Science (2005)

# Example of a Network of Disciplinary Societies: International Council for Science (ICSU)

- 113 multi-disciplinary National Scientific Members, Associates, and Observers (scientific research councils or science academies).
- representing 133 countries
- 29 international, single-discipline Scientific Unions.
- 24 Scientific Associates.

## Example: Workshop on U.S. Disciplinary Societies' Role in Increasing Diversity in Science and Engineering

- 24 societies attended workshop.
- Pre-workshop questionnaire
  - 120 people identified as at societies, involved with sections or divisions within societies, etc,
  - 58% responded ... provided information about the structures, types of people , resources allocated, etc.
- Workshop: presentations
  - Survey results.
  - Programs run by several organizations.
  - Discussions about strategies that are feasible ... and potential pitfalls with attention to the organizational structures of the efforts for diversity in these societies.



# Workshop Outcomes

- **Measure and assess the effectiveness of the society's current internal diversity efforts (e.g., staff, volunteers, and membership)**
  - Evaluate successes using goals and objectives.
  - Pinpoint areas for improvement.
  - Benchmark externally for best practices and establish mechanisms of accountability.
- **Articulate the society's business case for diversity**
  - Define diversity and inclusiveness for the society.
  - Outline how diversity supports the vision, mission, and goals of the society.
  - Identify specific benefits to the society.
- **Mainstream diversity**
  - Provide training and resources (e.g., staff support and funding) for diversity committees and caucuses.
  - Continually educate and engage membership in diversity initiatives through surveys and communication vehicles. Communicate survey results back to membership.