

GenderInSITE

Gender in science, innovation, technology and engineering



Bringing a gender lens to science policy: implications to sustainable development

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Panel Best Practices: Global Perspectives on Equity, Diversity and Inclusion in STEM

GIS Vision

The GIS vision is that an equitable and sustainable development can only be achieved if STI are at the basis of the equation and if you include both men and women in that effort. A greater diversity of perspectives and insights in SITE will make its processes and products more equitable overall; a greater equity in the products of science (knowledge, technologies and the ways they are applied) will in turn lead to more sustainable solutions to development challenges.

To achieve this it is needed:

- ❖ Equality in the **representation** of women and men at decision-making levels and in the agenda-setting process
- ❖ Equality in the **access** of women and men to SITE careers and to the knowledge created by SITE research and production
- ❖ Equality in the **impacts** of SITE on women and men – that is, who benefits from the products of SITE?

Transforming the production of knowledge

By “applying a gender lens to SITE,” GenderInSITE means to embed awareness of and sensitivity to all three of these issues in the institutions that determine the scientific agenda and that carry it out.

Only by mainstreaming gender awareness in the norms and cultures as well as the policies of these entities can the outcomes of SITE be systematically transformed in a way that meets the needs of both women and men.

Three initiatives in 2017

Two experts' seminars:

1. **Integration of gender perspectives in science and technology in Higher Education: contributions to the advancement of SDG's . April 20-21 2017, Buenos Aires, Argentina**
2. **Gender and Innovation: Implications for Sustainable Development. September 4-6, 2017, Pretoria, South Africa**

One report:

3. **Pathways to Success: bringing a gender lens to the scientific leadership of global challenges**

Integration of gender perspectives in science and technology in Higher Education

- Gendered representations, norms and values are embedded within the production of research itself.
- This leads to an imperative – it is not enough to “fix the numbers” of women in SITE; we must transform the knowledge itself by integrating a gender dimension into research content, curricula and teaching practices.
- To change this, the prevailing culture of academic institutions must themselves be viewed under a gender lens
- Even when strong gender equality plans are in place, major obstacles remain. Prominent among these is the male-dominated institutional culture that drives many women out of STEM careers.

Gender and Innovation: Implications for Sustainable Development

➤ International project of case studies of gendered innovations in the South

Five case studies showcasing innovation from the South: Sub-Saharan Africa/ Central and East Asia / South and Southeast Asia / Latin America & Caribbean / Middle East and North Africa

Showcase the complex link between gender, innovation and SDGs; demonstrate the value of gendered innovations by showing the positive impacts as well as by showing the consequences when gender is not considered; analyze the environment needed to enable the innovations.

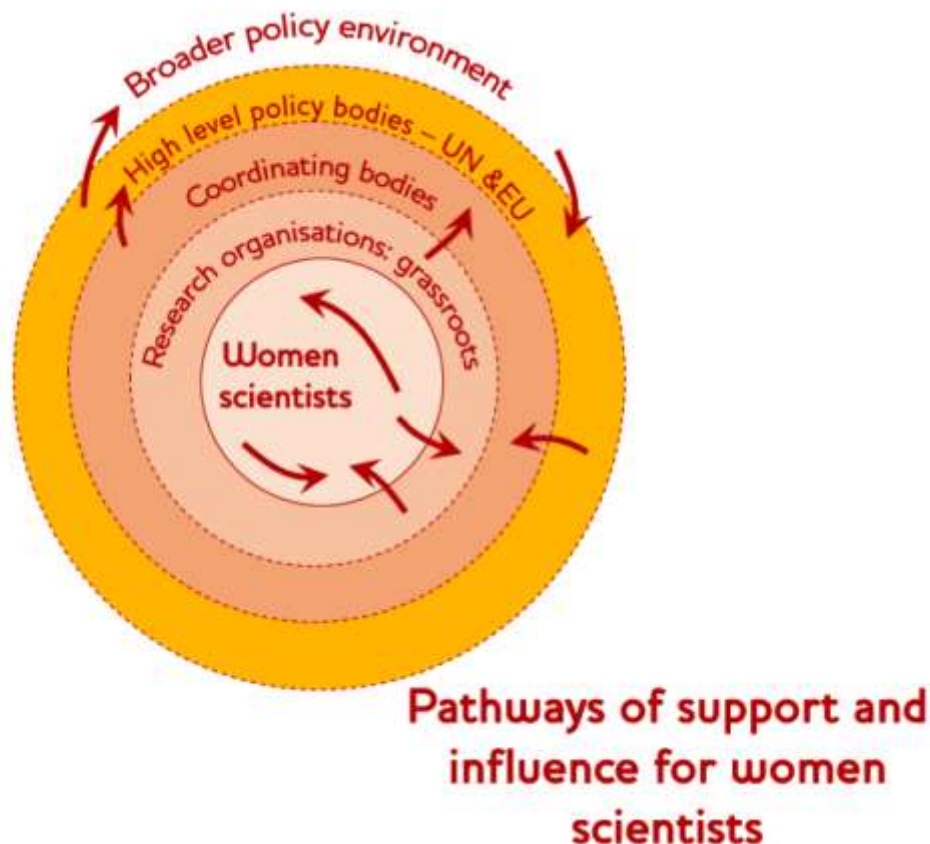
➤ Influencing the funders.

Pathways to Success: bringing a gender lens to scientific leadership of global challenges

- Unequal gender representation in science leadership across all levels, BUT variable substantive commitment to transformative change.
- Combination of promise and stagnation within and across layers, and varies in time.
- Promising new policy pathways have opened in EU science governance structures
- Gender policies in scientific organizations appear – at present – to remain largely rhetorical with very little action taking place.
- At the grassroots-level, little rhetoric, or even formal policy, but lots of actions, large and small, taken to support women scientists in their pathways toward leadership,

Pathways to Success

Policy pathways and individual women scientists' career pathways are intimately intertwined across the levels of the scientific system.



- Where have progressive policies (and practices) on gender in science emerged and where have they stalled?
- Who and what have been the primary change agents and driving forces behind these developments?
- What are the relationships between policy and behaviour change, and individual women scientists' pathways to leadership?

Gender Summit North America, Montréal, 2017

Transforming Institutions From Inside? European Experiences on Structural Change Towards Gender Equality in Research Performing Organizations

Maxime Forest, PhD

Senior Researcher and Lecturer, Sciences Paris
EGERA Project Scientific Coordinator



SciencesPo
ofce

Gendering Research and the Academia in the European Union: Where do we stand?

A momentum?

- In the EU, there is **about 1,500 universities and research performing organizations carrying out gender equality plans/ strategies**
- In various countries, this results from a **legal obligation** at the national and/or the sub-national level
- In the UK and Ireland, the **Athena-SWAN** has generated nearly 500 equality strategies in over 150 universities and RPOs
- Since FP7, several generations of EU-funded structural change project have been developing **increasingly holistic approaches**
- Venues for mutual learning multiply, efforts become more cumulative, **a finer-grained picture of success factors and resistances emerges**

And yet, efforts remain tedious and thorny...

- **Little resources** are made available to these strategies, which are often led in isolation from the institution itself
- **Their scope is too often limited** to fixing numbers and improving work-life balance = big gaps
- **Limited evaluation** and monitoring (if any) = dead letters
- Gender equality and gender dimension in science **disconnected from “actual” challenges posed to science and innovation: Excellence often opposed to mainstreaming gender**
- **Structural change projects** = new standard for Gender Equality Plans, but **no guarantee for greater visibility, accountability, efficiency or sustainability**

We know about basic success factors:

- ✓ **Carrying out both quantitative and qualitative diagnoses**
- ✓ **Mobilizing and transferring (gender) knowledge**
- ✓ **Securing top-level support to increase legitimacy**
- ✓ **Adopting an holistic approach in terms of issues and targets**
- ✓ **Institutionalizing gender expertise and policies**
- ✓ **Monitoring changes and evaluating actions**

The EGERA experiment: Politicizing & Institutionalizing Gender Equality and a Gender Perspective in Research

Beyond EGERA partners' commitment to negotiate changes with highest management levels, core project activities were devoted to **challenging governance and evaluation from a gender perspective > Charter for gender sensitive research governance and evaluation (Nov 2016)**

At Sciences Po, **politicizing gender equality** included:

- ✓ **Opening direct channels with top-management**
- ✓ **Building a network of like-minded managers**
- ✓ **Making language political, towards gender sensitive communication**
- ✓ **Institutionalizing gender equality policies and training** (incorporated into existing schemes, framing documents, regulations and practices)
- ✓ **Engaging the whole community with pursued changes**

Efforts were also deployed to bring gender equality and the gender dimension in research to the level of strategic challenges such as :

- ✓ **International competition** for skills, funds and innovations
- ✓ **The global transformation of university teaching**
- ✓ **The growing financial autonomy** of Research Performing Organizations
- ✓ **The professionalization of research management**

But we also strived for creating accountability:

Bottom-up:

- ✓ Social media as a record of pledges and a measure of support
- ✓ Students and social partners as advocates for changes

The screenshot shows a Facebook post from the page 'Sciences Po'. The post is dated '22 septembre, 18:14' and features a red circular logo with a white silhouette of a horse and rider. The text of the post reads: 'On 21 September, Sciences Po President Frédéric Mion met Emma Watson at the 2nd anniversary celebration of the HeForShe movement in NYC. Universities including Sciences Po, University of Oxford and Georgetown University aim to make great strides towards gender equality. Click to discover how Sciences Po is taking action! <http://bit.ly/1e0Zmxj> // Mardi, le Directeur de Sciences Po Frédéric Mion a rencontré Emma Watson à New York à l'occasion du deuxième anniversaire de HeForShe. Diverses universités prestigieuses telles que Sciences Po, University of Oxford ou Georgetown University se sont engagées en faveur de l'égalité femmes-hommes. Cliquez pour découvrir les mesures mises en place par Sciences Po : <http://bit.ly/2ddurin>'. Below the text is a video thumbnail showing Emma Watson with the caption: 'Emma Watson UN World Women's Day Last September, I launched a campaign at the UN in New York called He for She.' The post has '17 K vues' and options to 'J'aime', 'Commenter', and 'Partager'. The right sidebar shows a list of friends and a search bar.

Peer level:

- ✓ Activating benchmarking (among institutions, services or units)
- ✓ Naming & shaming: it's all about reputation, stupid!

Top-down:

- ✓ Making commitments public (HeforShe, National Press)
- ✓ Sharing commitments with top and mid management
- ✓ Mainstreaming a culture of equality



Engaging the whole community means...

- ✓ Targeted awareness and training actions for **all components of the community**
- ✓ **Mobilizing students making them responsible and accountable**
- ✓ **Empowering staff and their representatives** by providing new data and knowledge about inequalities, and widely disseminating them
- ✓ **Making sexual harassment a concern for everyone** (in terms of reporting, monitoring and actions)

**While people need to be engaged and involved,
it is the institution and its processes that need to be changed!**



PERSPECTIVES CANADIENNES: DU LOCAL AU GLOBAL

Liette Vasseur

Chaire UNESCO en viabilité des
communautés: du local au global

Brock University

Perspectives

- Comme Chaire UNESCO
- Coalition canadienne des femmes en ingénierie, science, métiers et technologies (CCWESTT)
- Education and Research Institute (ERI)
- UNESCO



Ma chaire UNESCO

- Biologiste
- Communautés rurales et côtières
- Aspects genre
- Aspects accès à la recherche scientifique

		
United Nations Educational, Scientific and Cultural Organization	• UNESCO Chair on • Community sustainability: from local to global, • St Catharines, ON, Canada	• Chaire UNESCO • en viabilité des communautés: • du local au global, • St Catharines, ON, Canada



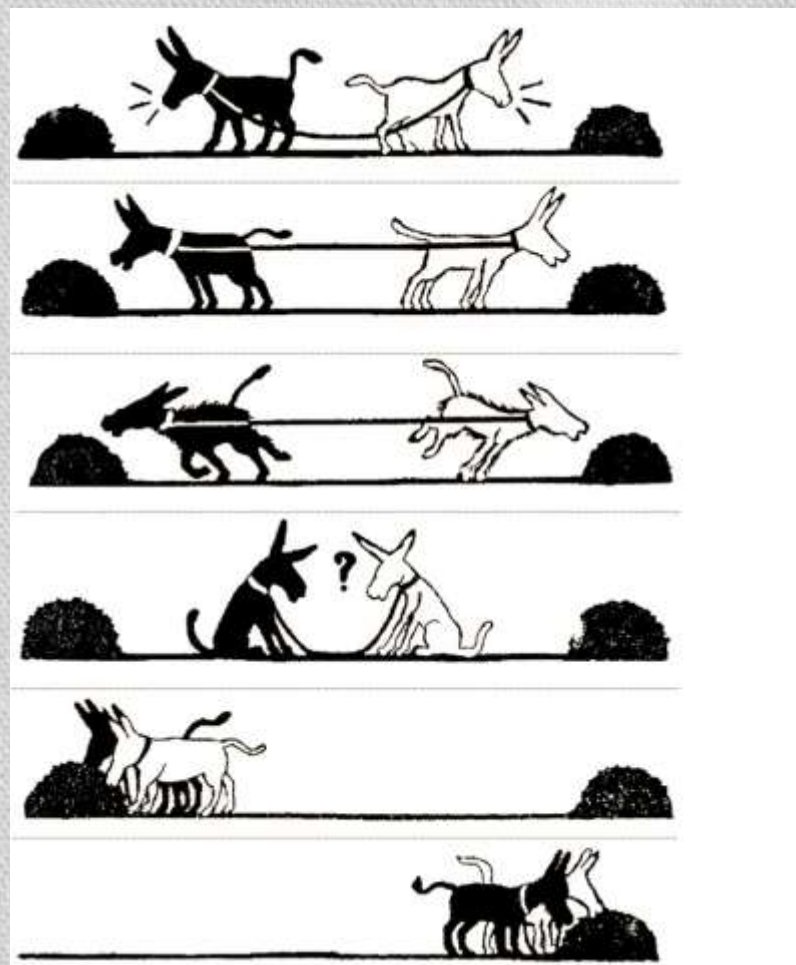
Les héroïnes

Jardin scolaire: travailler ensemble pour une agriculture durable



CCWESTT

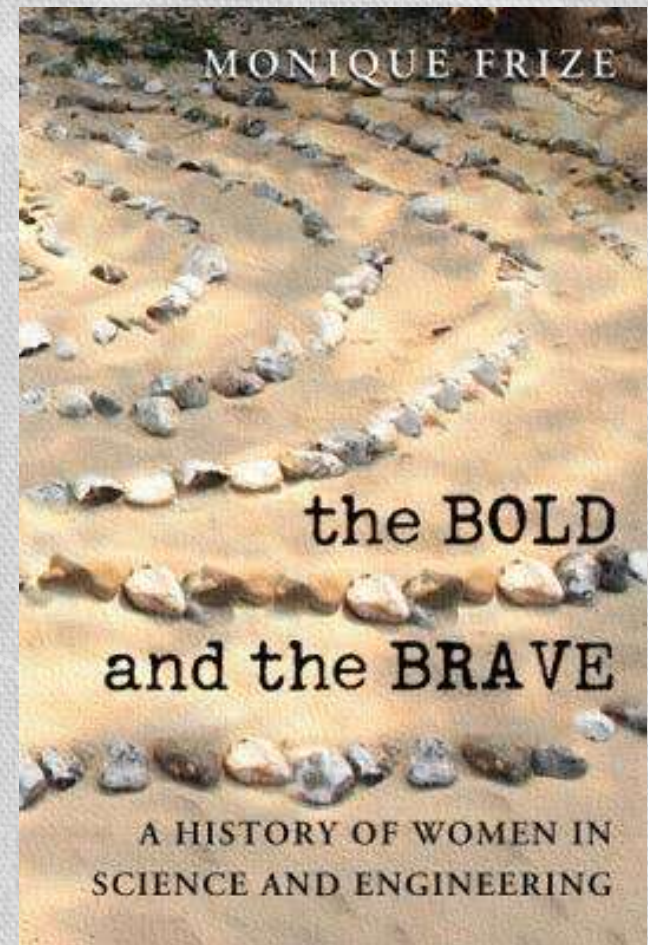
- Coalition d'organisations et institutions
- Et le centre WinSETT
- Ateliers de formation
- Leadership, promotion
- Et AFFESTIM



ERI

- Relié à INWES
- Grande initiative: Construire les archives des femmes en sciences et ingénierie au Canada
- À long-terme: à travers le monde

Où commencer ?



Archives de la Société des femmes ingénieures (SWE), depuis 1950

The screenshot displays the website for the Society of Women Engineers (SWE). The browser address bar shows the URL societyofwomenengineers.swe.org/membership/history. The website features a navigation menu with links for PUBLIC POLICY, SWE MAGAZINE, CAREER CENTER, and WEST CONFERENCE. The SWE logo is prominently displayed with the tagline "Aspire / Advance / Achieve". Below the logo, there are social media icons for Facebook, Twitter, LinkedIn, YouTube, and Instagram, along with a text size selector set to "A A".

The main content area is divided into several sections:

- MEMBERSHIP**: Includes links for Join, Types & Benefits, Portal, Sections, Public Policy, SWE Store, History, International, Member Services, Event Funding, and Governance.
- LEARNING**: A section for educational resources.
- SCHOLARSHIPS**: A section for financial aid opportunities.
- AWARDS**: A section for recognizing achievements.
- K-12 OUTREACH**: A section for educational programs for young children.
- SUPPORT SWE**: A section for ways to support the organization.

The featured article, "A Woman Engineer's Story," includes a portrait of Alva Matthews and a quote: "Once you educate everybody to think about engineering as a profession for women, you begin to interest women in the math and science fields. Women have really reached out to achieve, other than just the things they could achieve before." Below the quote is a link to "View more" and a "Share" button.

Other notable sections include:

- Corporate Partnership Council**: A section for industry partners, featuring a logo for IS BRIDGESTO TRK.
- MIT LINCOLN LABORATORY CAREERS**: A section for career opportunities, featuring a quote: "Imagine it. Build it. Be the first."
- JEFFERSON SCIENCE FELLOWSHIPS**: A section for fellowships, featuring a quote: "Bridging Science and Statecraft."
- The SWE Story... Our History, Our Legacy**: A section with a "Learn more" link.
- From SWE's Archives**: A section with a "View archives' Tumblr page" link.

The bottom of the page shows a Windows taskbar with the system clock indicating 12:13 on 2017-08-21.

Apprendre - UNESCO

- SAGA
- Et partager les bonnes pratiques
- Recherche et actions
- Documenter et communiquer

Aide,
partage
et
diversité





MERCI

Thank you

lvasseur@brocku.ca



Advancing Excellence and Innovation by Reducing the Impact of Bias in the STEM Workforce

**Wanda E. Ward, PhD
Senior Advisor, Office of the Director
U.S. National Science Foundation**

**Gender Summit 11
“*Embracing Pluralism and Thriving through Diversity*”
Montreal, Canada**

November 07, 2017

Equity, Diversity and Inclusion in STEM: Global Imperative

- **Science and Innovation**
- **Workforce**
- **Economic**
- **First Principles**
- **Moral**

Gender Summit 3 North America: Roadmap

- **Policy**: Ensure broad and transparent policies to [mitigate the impact of] gender bias and discrimination
 - institution-wide policies for peer reviewer training on bias
 - diversity in review panels
 - monitor success rates
- **Process**: Establish checks and balances to identify and [mitigate the impact of] bias and collect data to monitor outcomes

Mitigating Barriers to DEI — Research on Bias

- A substantial body of research shows that virtually all people carry unconscious biases
- Biases shape attitudes and behavior
- Behaviors include hiring, mentoring, and promotion
- These behaviors affect inclusion of women and minorities in the STEM workforce

U.S. Bias Mitigation Interagency Policy Group (IPG)

U.S. Office of Science and Technology Policy and Office of Personnel Management Memorandum: Increasing Diversity in the STEM Workforce by Reducing the Impact of Bias

- Established interagency policy process
- Inventoried best/promising evidence-based practices in Federal STEM agencies
- Issued report recommending policy options (15 participating Federal agencies and Executive Offices of the President)

“Reducing the Impact of Bias in the STEM Workforce: Strengthening Excellence and Innovation,” November 2016

Best, Promising, and Emerging Practices

Best Practices

- Analyses of mandated workforce data sets
- Implicit bias training
- Conflict resolution
- Work flexibility

Best, Promising, and Emerging Practices

Promising Practices

- Diversity change agents
- Diversity tool kits
- Technical qualifications board
- Grant proposal review experiments

Best, Promising, and Emerging Practices

Emerging Practices

- Unconscious bias training targeted at search committees
- Bias training for the entire workforce
- Hiring and promotions safeguard pilots
- New inclusive workforce tools

Top Strategies at the Federal-Academic Interface

- Proactive use of diversity, equity, or inclusion grants
- Family-friendly policies and programs
- Compliance reviews
- Institutional access to bias mitigation resources

Recommendations

■ Federal STEM Workforce

Exercise leadership at all levels, including senior officials, STEM program and administrative managers, human capital officials, and diversity and inclusion officials (or their equivalent), to reduce the impact of bias in their internal operations

Recommendations

- Federally funded institutions of higher education

Federal agencies can incorporate bias mitigation strategies into the proposal-review process and offer technical assistance to grantee institutions to implement bias-mitigation strategies

Recommendations

- Cross-cutting government leadership—STEM workforce and Federally funded institutions of higher education

OSTP, OPM, and the Department of Justice (DOJ), as appropriate, should exercise leadership to reduce the impact of bias in the Federal STEM workforce and Federally funded institutions of higher education

Implementation and Next Steps

- Interagency body to coordinate and review Government-wide implementation, scaling, gap identification, tool development, living inventory development
- Public engagement campaign
- Institutionalization plans
- Accountability measurement

Recent Developments

- American Innovation and Competitiveness Act (AICA) enacted: January 6, 2017
 - S. 308. Working Group on Inclusion in STEM Fields
 - Requires OSTP, in collaboration with federal agencies, to establish an interagency working group on promoting evidence-based diversity and inclusion in the Federal workforce and STEM fields, with specific emphasis on: providing flexibility for scientists and engineers who are caregivers, particularly on the timing of research grants; policies to properly address sexual harassment; and to minimize effects of implicit bias and other systemic barriers in hiring, promotion, peer review, and the workplace more broadly.

Agency-specific Efforts: NSF

- **Policy and Process: Merit Review**
- **Content: *Science of Broadening Participation* Research Portfolio on Bias**