

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.

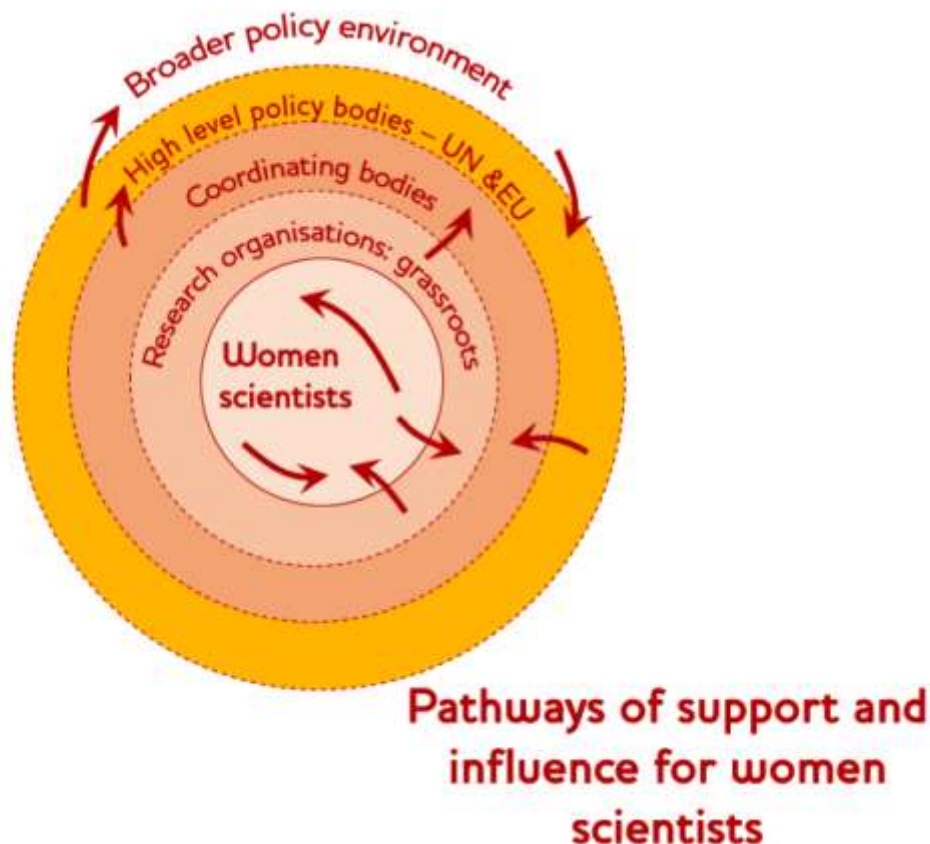
➤ Influencing the funders.

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

Un regard *d'insider* sur les expériences européennes en faveur de l'égalité femmes-hommes au sein des organismes de recherche

Maxime Forest, PhD

Enseignant-Chercheur, Sciences Po Paris
Coordinateur Scientifique, Projet EGERA



SciencesPo
ofce

Stratégies pour l'égalité et l'intégration du genre dans la recherche en Europe : où en est-on?

Un moment clé ?

- On compte aujourd'hui plus de **1,500 universités et organismes de recherche engagés sur des stratégies ou plans d'égalité**
- Dans plusieurs pays, ces stratégies résultent d'**obligations légales**
- Au R-U et en Irlande, 150 universités et organismes de recherche sont engagés dans **Athena-SWAN** à travers plus de 500 stratégies pour l'égalité
- Plusieurs générations de **projets transnationaux financés par l'UE** ont permis de développer des **approches holistiques** traitant à la fois de l'égalité F-H et de l'intégration du genre dans la recherche
- **Une compréhension commune et plus fine des facteurs de succès et des résistances** au changement émerge en Europe

Et pourtant, la portée de ces stratégies reste limitée...

- Celles-ci sont souvent conduites **sans ressources dédiées et isolément du fonctionnement habituel de l'institution**
- **Leur objet se limite trop souvent à changer les chiffres de la participation des femmes et à améliorer la conciliation vie professionnelle-vie familiale**
> nombreuses questions non traitées
- **Faute de suivi et d'évaluation, nombre de stratégies restent lettres mortes**
- **L'égalité F-H et la dimension du genre dans la recherche sont abordés indépendamment des "vrais" défis posés à la recherche**
- S'ils sont synonymes de **nouveau standard en matière de plans d'égalité**, les projets financés par l'UE ne constituent **pas une garantie pour des politiques visibles, efficaces, redevables et soutenables**

Et cependant, les facteurs de succès nous sont connus :

- ✓ **Conduire des diagnostics à la fois quantitatifs et qualitatifs**
- ✓ **Mobiliser et transférer des connaissances sur le genre**
- ✓ **S'assurer d'un appui au plus haut niveau pour davantage de légitimité**
- ✓ **Adopter une approche holistique en termes de questions traitées et d'objectifs**
- ✓ **Institutionnaliser l'expertise et les politiques sur l'égalité et le genre**
- ✓ **Mesurer les changements, évaluer les actions menées**

L'expérimentation EGERA: Politiser le genre et l'égalité

Au-delà de l'engagement des partenaires EGERA de négocier les changements avec le plus haut niveau de responsabilité, **le projet visait à questionner du point de vue du genre la gouvernance et l'évaluation de la recherche** (Charter for gender sensitive research governance and evaluation, Nov 2016)

A Sciences Po, cet effort inclue :

- ✓ Ouvrir des canaux de communication directs avec le management
- ✓ Construire un réseau de managers *like-minded*
- ✓ Faire du langage un objet politique, pour une communication sensible au genre
- ✓ Institutionnaliser la formation à l'égalité et les politiques d'égalité

Des efforts ont été également déployés pour placer l'égalité et la dimension du genre dans la recherche au même niveau que des défis stratégiques tels que :

- ✓ **La compétition internationale pour les talents, les ressources et les innovations**
- ✓ **Les transformations globales de l'enseignement universitaire**
- ✓ **L'autonomie financière croissante des organismes de recherche et universités**
- ✓ **La professionnalisation du management de la recherche**

Nous avons également veillé à renforcer la redevabilité :

Du bas vers le haut :

- ✓ En utilisant les medias sociaux comme espace d'enregistrement des engagements
- ✓ En investissant étudiants et partenaires sociaux comme agents du changement



Horizontalement :

- ✓ Via un *benchmarking* (entre institutions, services ou départements)
- ✓ *Naming & shaming: it's all about reputation, stupid!*

Du haut vers le bas :

- ✓ En rendant public chaque engagement (via HeforShe, la presse nationale)
- ✓ En les partageant avec les niveaux intermédiaires du management
- ✓ A travers la diffusion d'une culture de l'égalité



Impliquer l'ensemble de la communauté signifie :

- ✓ **Mener des actions de sensibilisation et de formation pour toutes les composantes de la communauté**
- ✓ **Impliquer les étudiant-e-s, pour impulser les changements et les rendre redevables**
- ✓ **Donner davantage de ressources aux différentes catégories d'employé-e-s en diffusant de nouvelles données et connaissances à propos des inégalités et biais de genre**
- ✓ **Faire du harcèlement sexuel l'affaire de chacun**
- ✓ **Si les personnes doivent être impliquées, ces sont les institutions qui doivent être transformées**



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

Organisation des Nations Unies pour l'éducation, la science et la culture

uniTwin

Brock University

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



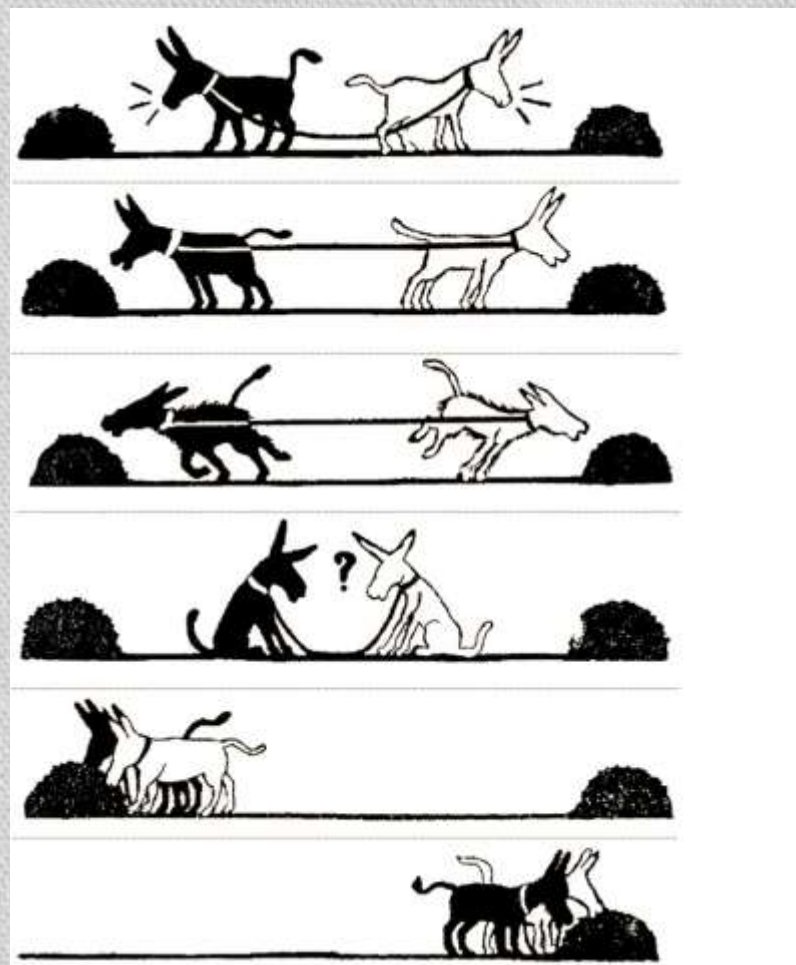
Les héroïnes

Jardin scolaire: travailler ensemble pour une agriculture durable



CCWESTT

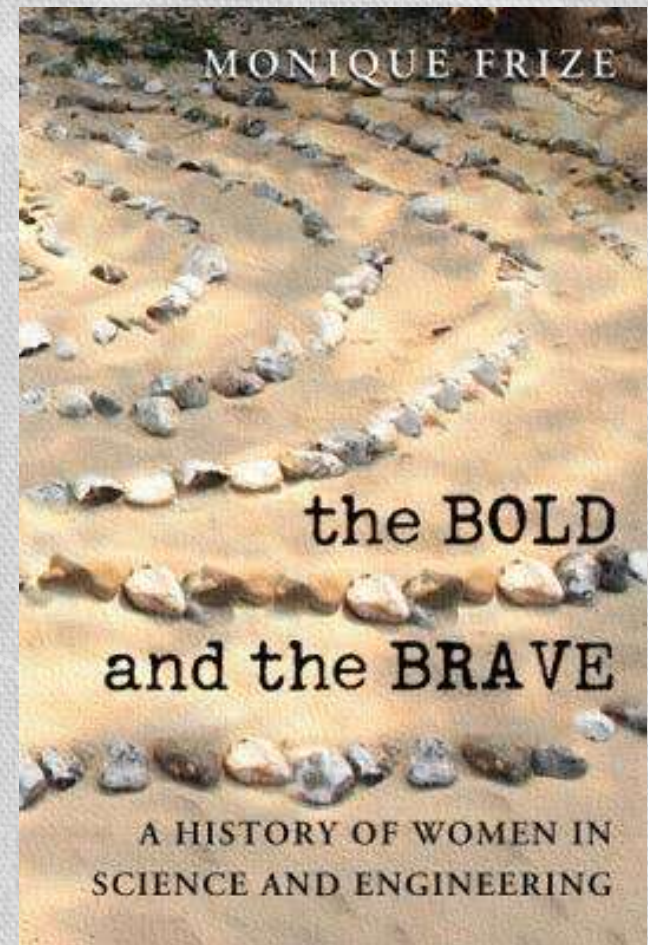
- Coalition d'organisations et institutions
- Et le centre WinSETT
- Ateliers de formation
- Leadership, promotion
- Et AFFESTIM



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 header includes navigation links for PUBLIC POLICY, SWE MAGAZINE, CAREER CENTER, and WEST CONFERENCE, along with a search bar, LOGIN, and DONATE buttons. The SWE logo is accompanied by the tagline "Aspire / Advance / Achieve" and social media icons for Facebook, Twitter, LinkedIn, YouTube, and Instagram. A secondary navigation bar lists MEMBERSHIP, LEARNING, SCHOLARSHIPS, AWARDS, K-12 OUTREACH, and SUPPORT SWE. Below this, a list of links includes Join, Types & Benefits, Portal, Sections, Public Policy, SWE Store, History, International, Member Services, Event Funding, and Governance. The main content area features a section titled "A Woman Engineer's Story" with a quote from Alva Matthews: "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 "Share" button and a small photo of Alva Matthews. To the right, there is a "CORPORATE PARTNERSHIP COUNCIL" section featuring logos for IS BRIDGESTO and TRK. Further down, a "RECENT EVENTS" section highlights a presentation by Marta with the text "Marta is passionate on what matters" and a "hp" logo. The bottom of the page contains several promotional tiles: "The SWE Story... Our History, Our Legacy" with a "Learn more >" link; "From SWE's Archives" with a "View archives' Tumblr page >" link; "JEFFERSON SCIENCE FELLOWSHIPS" with the text "Bridging Science and Statecraft"; and "MIT LINCOLN LABORATORY CAREERS" with the text "Imagine it. Build it. Be the first." and the "MIT LINCOLN LABORATORY" logo. The Windows taskbar at the bottom shows the system tray with the date 2017-08-21 and time 12:13.

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**