



SEA CHANGE

Making Diversity, Equity, and Inclusion in STEM Normative

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U.S. (2015)

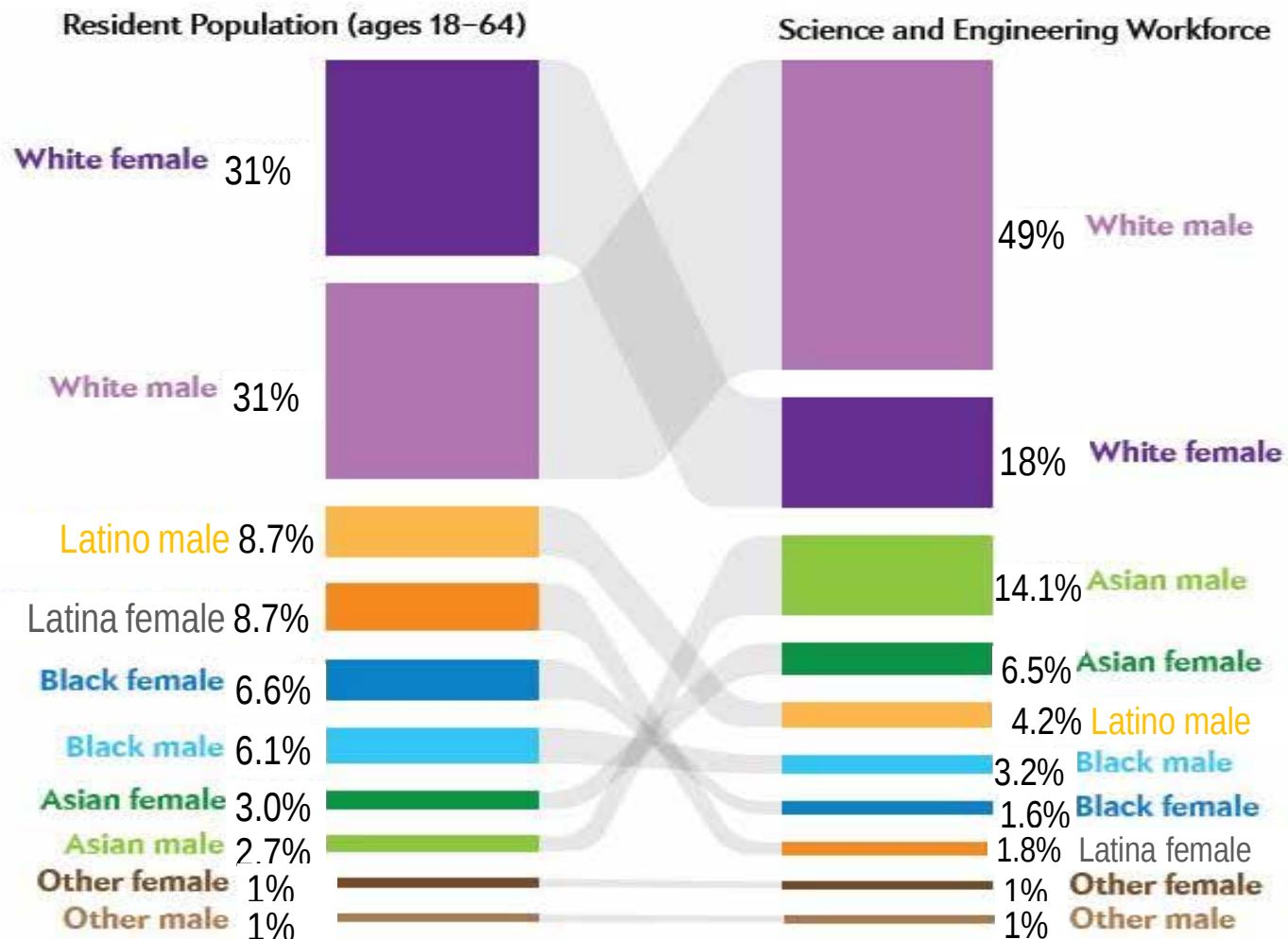


Figure adapted from Guterl
(2014).
Source: NSF (2017).

What Does It Mean to Have Intervention Programs for the Majority?

- Women are 57 per cent of students in higher education
- African Americans, Native Americans, and Hispanic Americans are about 30 per cent of students in higher education
- Difficult to justify “intervention” programs to support equity in STEM
- A rationale for systemic approaches

SEA Change: Beyond Interventions

- An opportunity to stand up as a member of a global higher education community committed to shifting the culture of academia to one that is truly inclusive, equitable, and diverse
- A public commitment to a set of Principles
 - “Bias, marginalization, and exclusion have prevented the full engagement of a broad range of individuals that is needed to maximize creativity and quality, as well as the full engagement of the promise of available talent, in STEM education and careers.”

Equality Charters Process



Est. 2005



Est. 2015



Est. 2015

- Institutional commitment
- Self-assessment criteria & protocol
- Award structure & criteria
- Peer-review model

Athena SWAN Evaluation 2019

- + The Charter is perceived as a key tool to help in the process of delivering real behavioral and cultural change.
 - + 93% of Champions believed that the Charter has had a positive impact on gender issues in their university, department, or research institute,
 - + 78% believed the Charter had a positive impact on equality and diversity issues, and
 - + 78% believed the Charter had a positive impact on the career progression of women.

Athena SWAN Evaluation 2019

- + Women in Gold departments are:
 - + more satisfied with reviews, more optimistic about career prospects, and more likely to have a mentor.
 - + more familiar with promotion criteria and processes
 - + more likely to have been encouraged to apply for promotion
- + Departments with awards have 7% more female staff compared to no award departments, have more gender balanced senior level promotions and more women on job shortlists, and make more appointments to women.

Why do it?

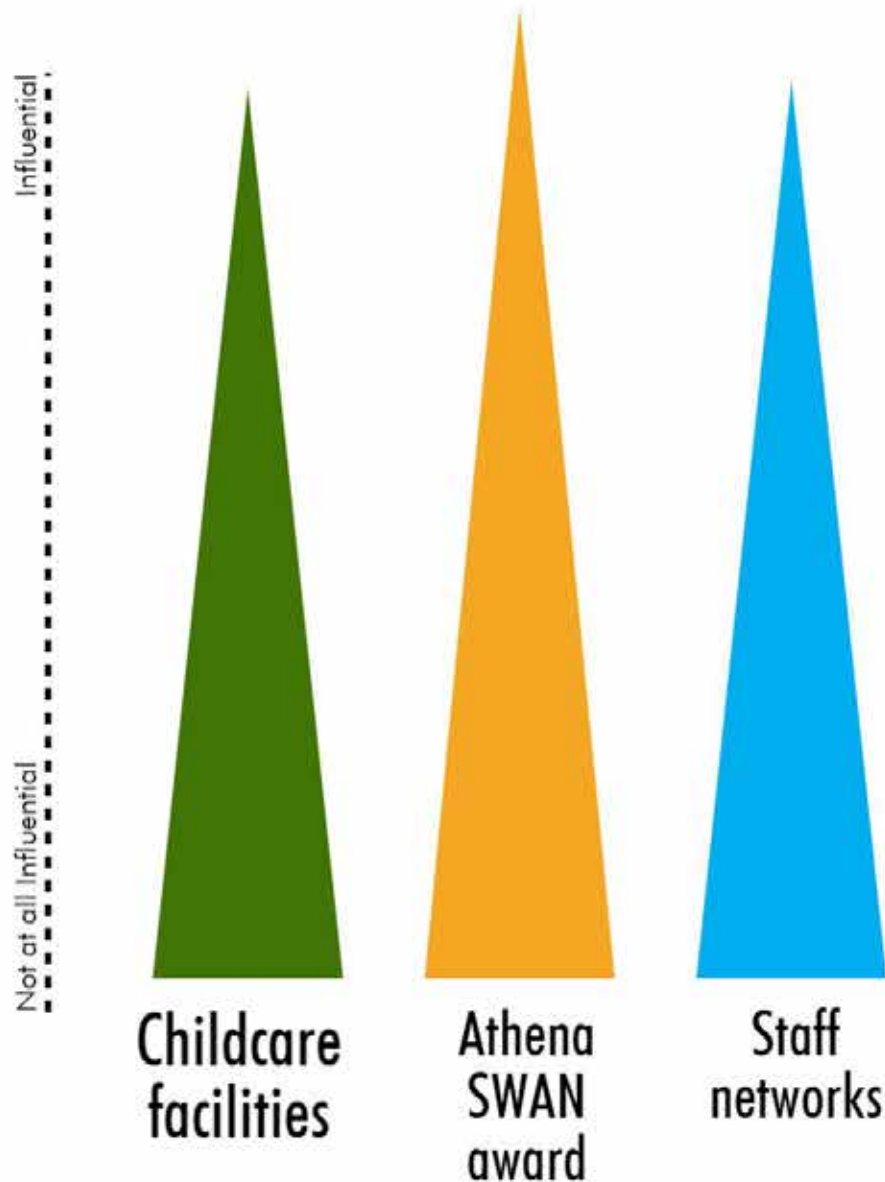
- + Athena SWAN and equality work delivers benefits to research

“We began a program of change in our practices and culture to enhance our position as a world-leading, research-led Chemistry Department. The Athena SWAN process has been immensely helpful in this...

Our increased collaborative working has led to our Research Volume increasing from £8M in 2007-8 to £13M this year.”



Department of Chemistry, Imperial College London



**WOMEN RATED
HOLDING AN
ATHENA SWAN
AWARD AS THE
TOP EQUALITY
ITEM TO
CONSIDER
WHEN DECIDING
TO TAKE A POST**

Why SEA Change? The Tangibles and Intangibles

- Declaration of institutional values
- Diversity significantly impacts innovation, creativity, and productivity
- Competitive advantage in recruitment, hiring, and retention
- Opportunity to associate with and to associate one's institution with equity-minded individuals and organizations
- Sharing concerns, strategies to achieve DEI in safe space
- Accessing research, training, issues-based convenings
- Guided investigation of policies in light of diversity law



What is the self-assessment process?

Awareness → Understanding → Action → Reflection :||

- Includes finding data and information gaps and developing plans to close the gaps
- Looks not only at “numbers” but at policies, procedures, leadership, and climate/culture
- Holistic assessment producing an environment more conducive to true equity and inclusion

Not a box-ticking exercise

What is the self-assessment process?

Awareness → Understanding → Action → Reflection :||

1. **Collect** data
2. Critically **analyze** data
3. Use data to **identify** problem areas, and *why* these are problematic
4. Develop a 5-year SMART **action** plan to address these
5. Show **progress** over time

What is the self-assessment process?

	Bronze	Silver	Gold
A thorough self-assessment using qualitative and quantitative analyses	X	X	X
Identifies key issues	X	X	X
Actions in place to address key issues and carry the institution forward	X	X	X
Demonstrates impact of previous activity and expands action plan to continue progress		X	X
Serves as a beacon in the sector and beyond			X

Faculty

Grad Students • Undergrads

Policy, practices, procedures,
climate across an institution

AAAS

SEA CHANGE
INSTITUTIONAL
BRONZE AWARD

**SYSTEMIC
TRANSFORMATION**

AAAS

SEA CHANGE
DEPARTMENTAL
BRONZE AWARD

Policy, practices, procedures,
climate within a department

Faculty

Grad Students • Undergrads

AAAS

SEA CHANGE

Institutional Awards

- Focal populations
 - Faculty (*primary focus*), graduate students (*limited focus*), undergraduates (*limited focus*)
- Required characteristics
 - Gender, race/ethnicity, and intersectionality of all
- Optional characteristics (*possibly choose one*)
 - LGBTQA+ status, socioeconomic status, history of higher education in family, disability status, age, & related intersectionalities

Institutional Awards

- Must complete new application and demonstrate progress (even Bronze → Bronze renewal) every 5 years
- Supporting continuous improvement/discouraging “backsliding”

Institutional Bronze Awardees



**Cohort 2
Application
Deadline
April 30, 2020**

Changing the Disciplines—SEA Change

- What is a “healthy department” and why it should be supported
- Partnerships with disciplinary societies to address the variability among fields regarding diversity and inclusion
- Professional societies develop metrics aligned with SEA Change
- SEA Change department level award can only advance to Silver after the institution has at least a Bronze
- Addressing more fine grained issues: departmental climate, practices, more inclusive research agenda, how students are taught



**Disciplinary Society
Partner Coalition**



End Goal

- Collective impact resulting in systemic change
- Formation of a holistic self-assessment process
- Addressing specific needs of the field
- Ensuring that the SEA Change Departmental Awards process provides same general experience across coalitions
- Building capacity and ensuring sustainability

Considerations

- Input from all disciplinary society stakeholders vs. ensuring process integrity
- Using programs already established while trying to provide continuity across coalitions

The Physics & Astronomy Working Group



Beth Cunningham, Executive Officer

Robert Hilborn, Assoc. Exec. Officer



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QUESTIONS?