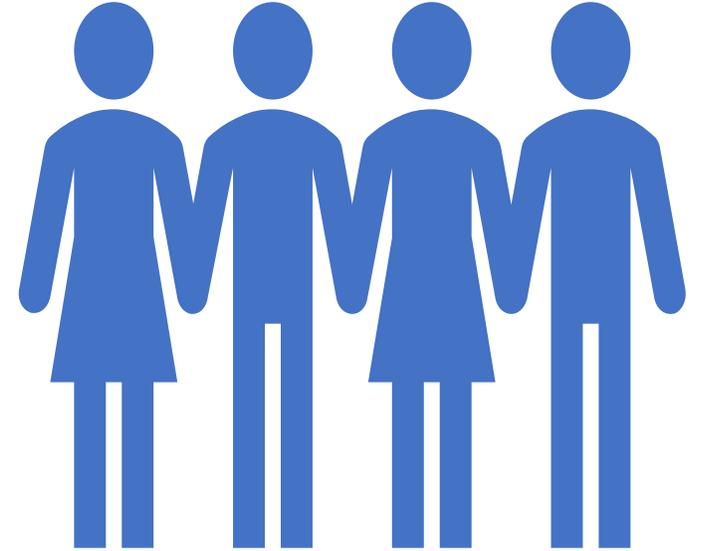
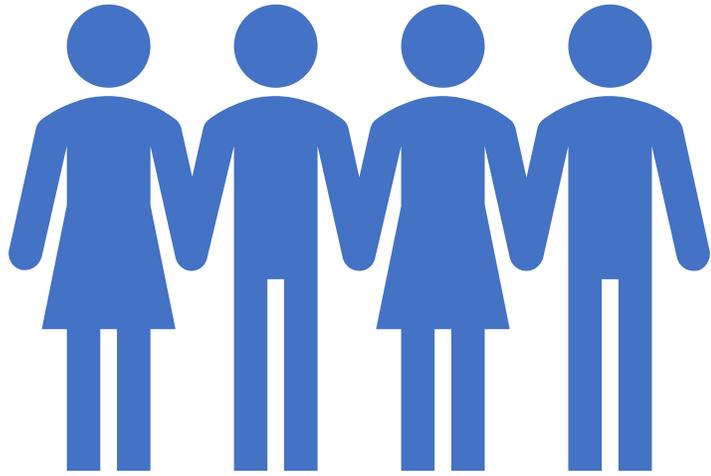


The Value of Diversity and Inclusion

Kellina Craig-Henderson, PhD

Social, Behavioral, and Economic (SBE) sciences





Diversity (di·ver·si·ty)

- Differences within a group of people resulting from demographic characteristics, cultural identities and ethnicities, and training and expertise.

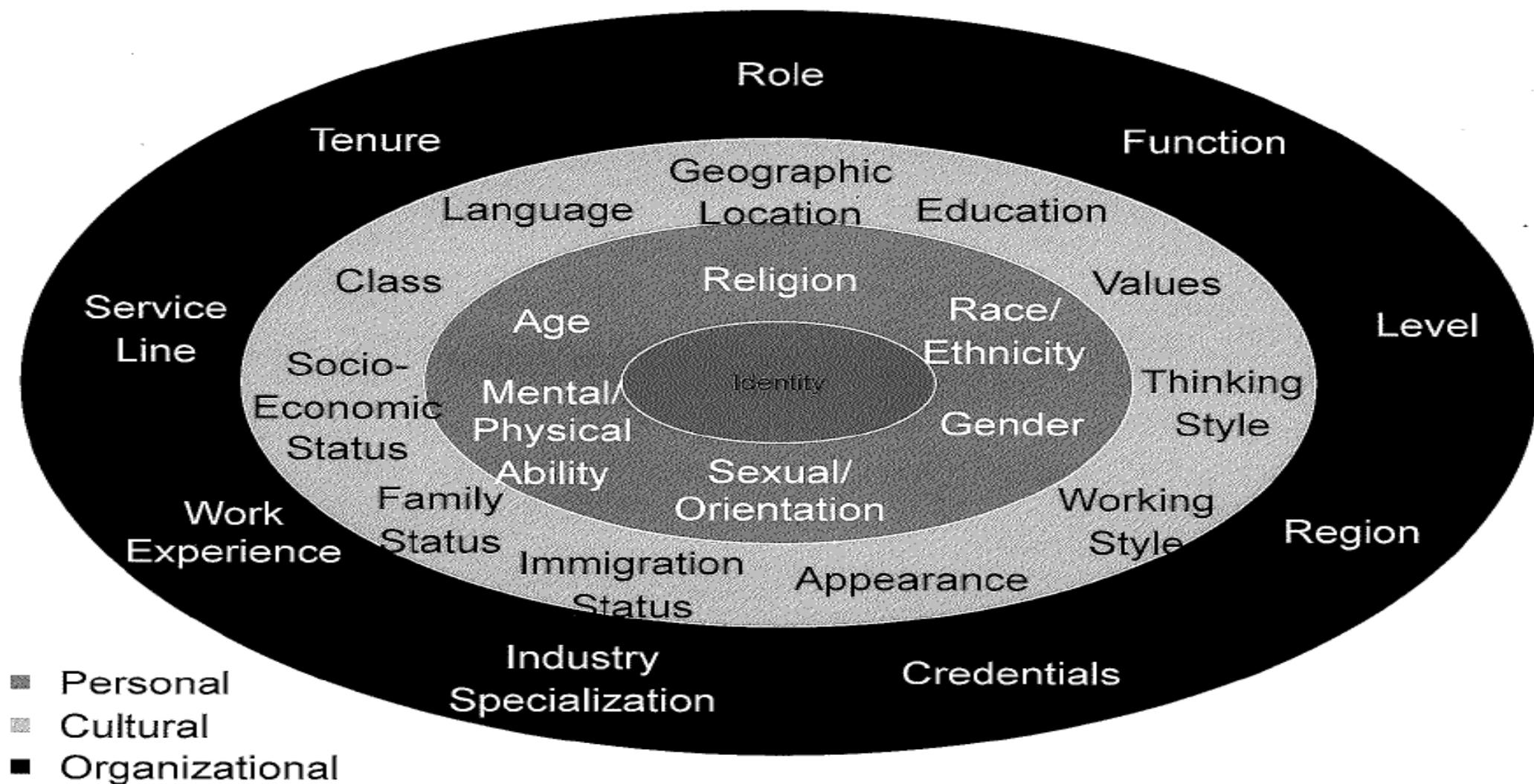
Inclusion
(in·clu·sion)

Being present in a social unit
AND being entitled to all
conditions of that unit.

Inclusion is not the same as
Tolerance

**Inclusion is better than
Tolerance!**

Diversity Has Many Layers



Diversity Throughout the World

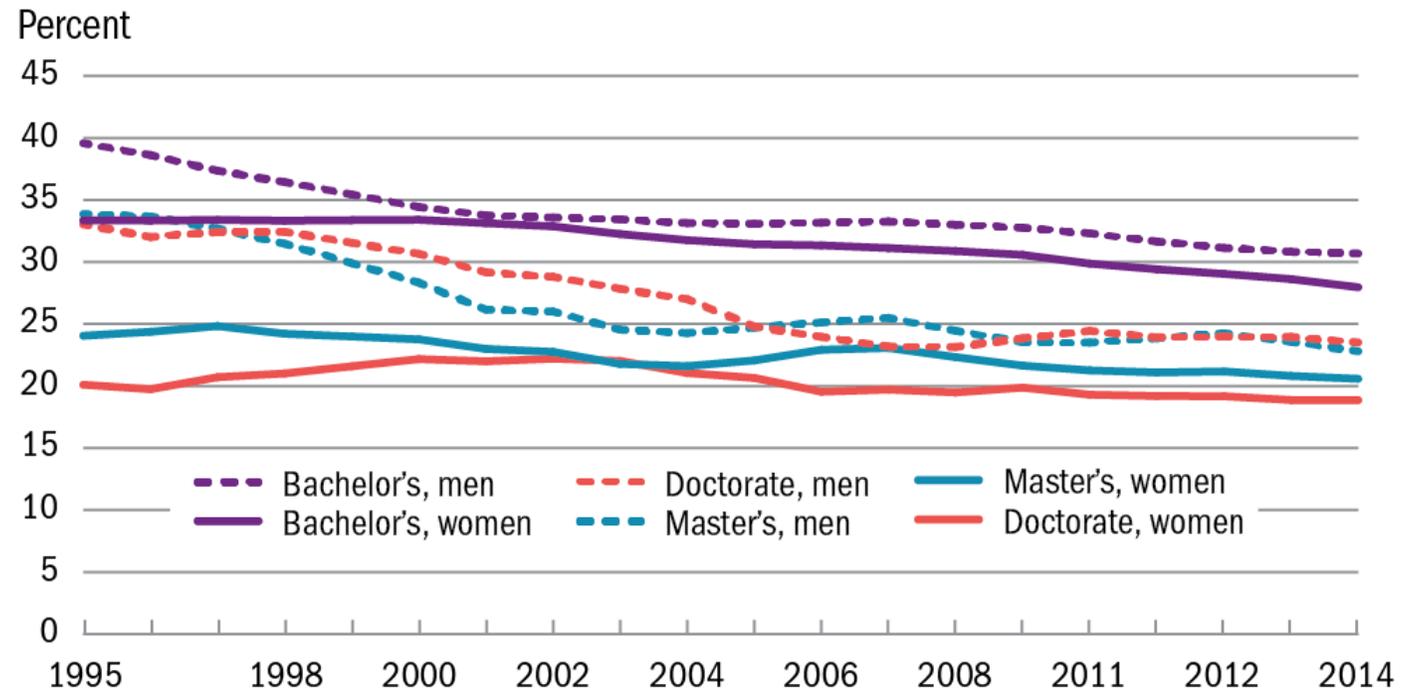
- There are about 7.6 billion people on the Earth, 5% (325 M) are in the US.
- Asia is the largest continent in the world.
- Russia is the largest country in the world.
- There are 54 countries in Africa, not 2 or 3.
- China is the most populous country in the world.
- 23% of the global population are Muslims
- Ten of the world's largest cities are in Asia and Africa. None of them are in the U.S.
- Half of the people in the US are women, twice as many are at age +85
- Non-Hispanic Whites make up 62% of the US population, by 2045 they will be 49%
- 844 million people on Earth lack even a basic drinking-water service

WOMEN

**Like men,
only cheaper.**

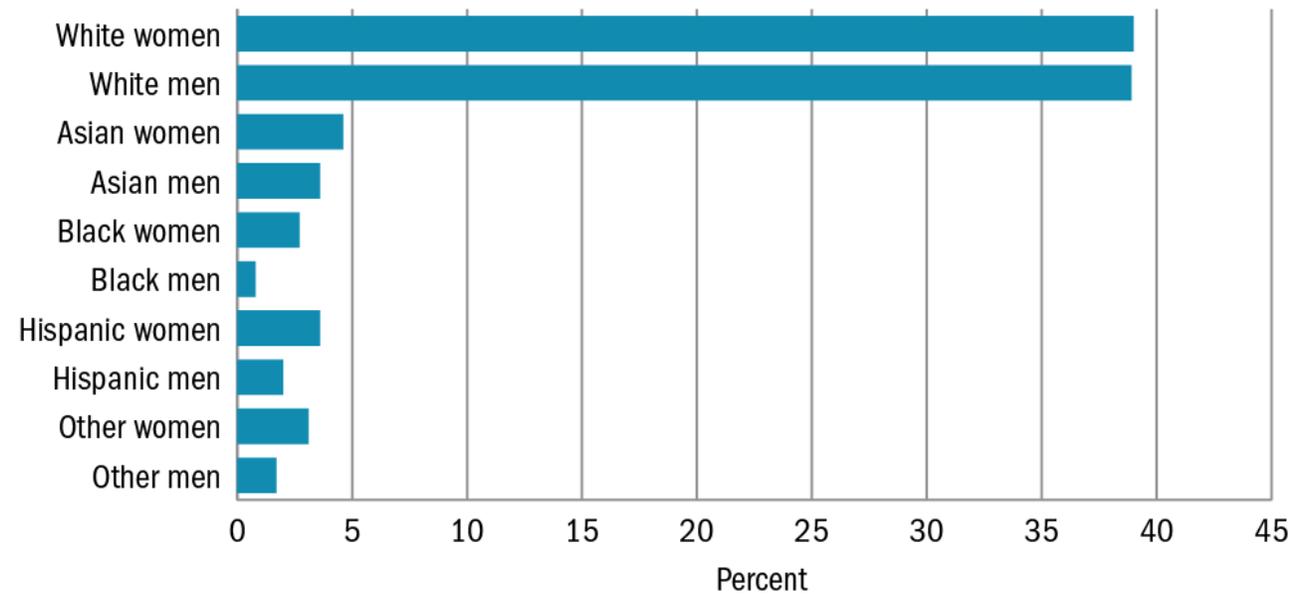


Science and engineering degrees earned by white women and men: 1995-2014



NOTE: Data not available for 1999.

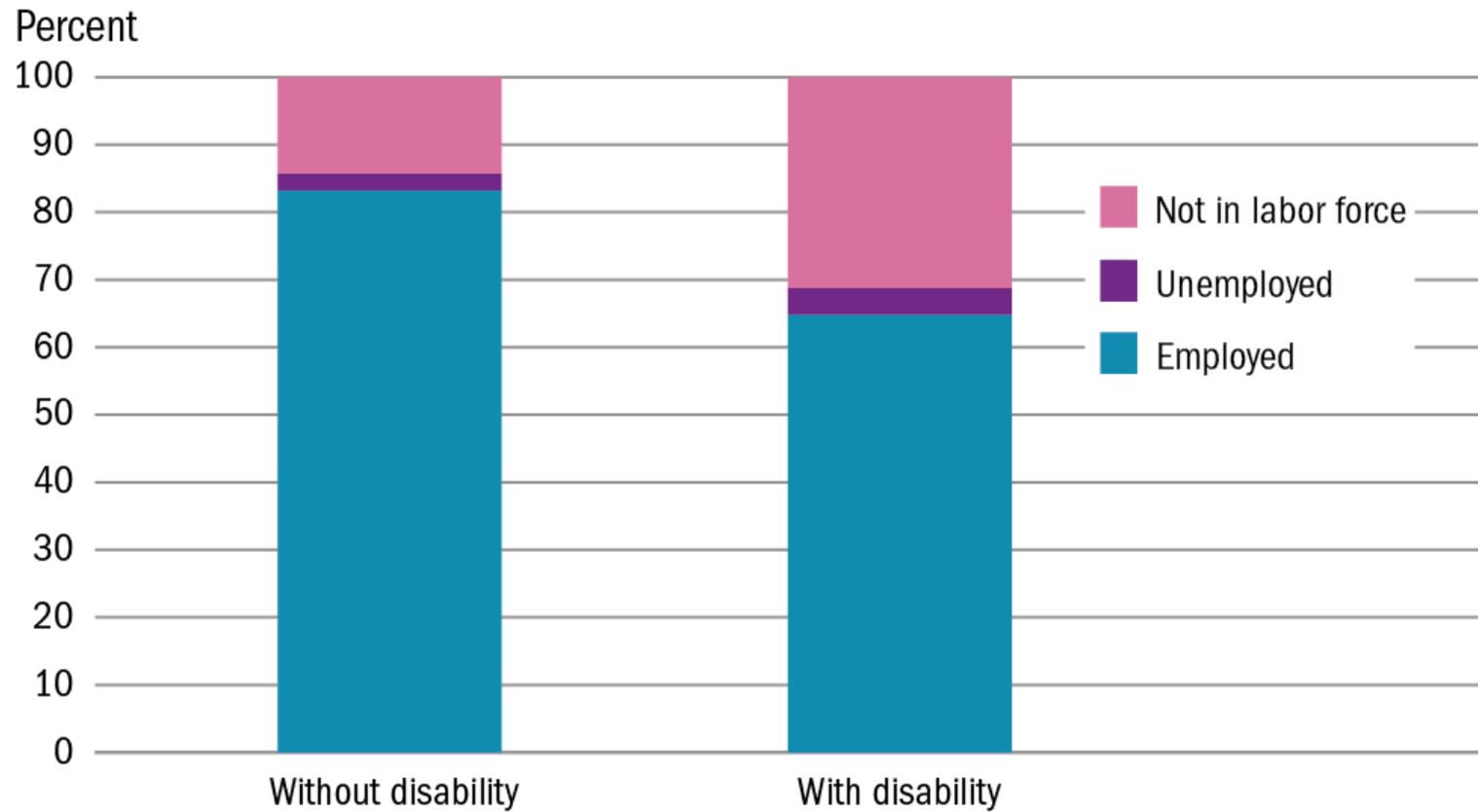
**Race, ethnicity, and sex of early career doctorate holders with a science and engineering degree:
2014**



NOTES: Hispanic may be any race. Other includes American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, and respondents who selected more than one race.

Women, Minorities, and Persons with Disabilities in Science and Engineering: 2017

Employment status among scientists and engineers, by disability status: 2015

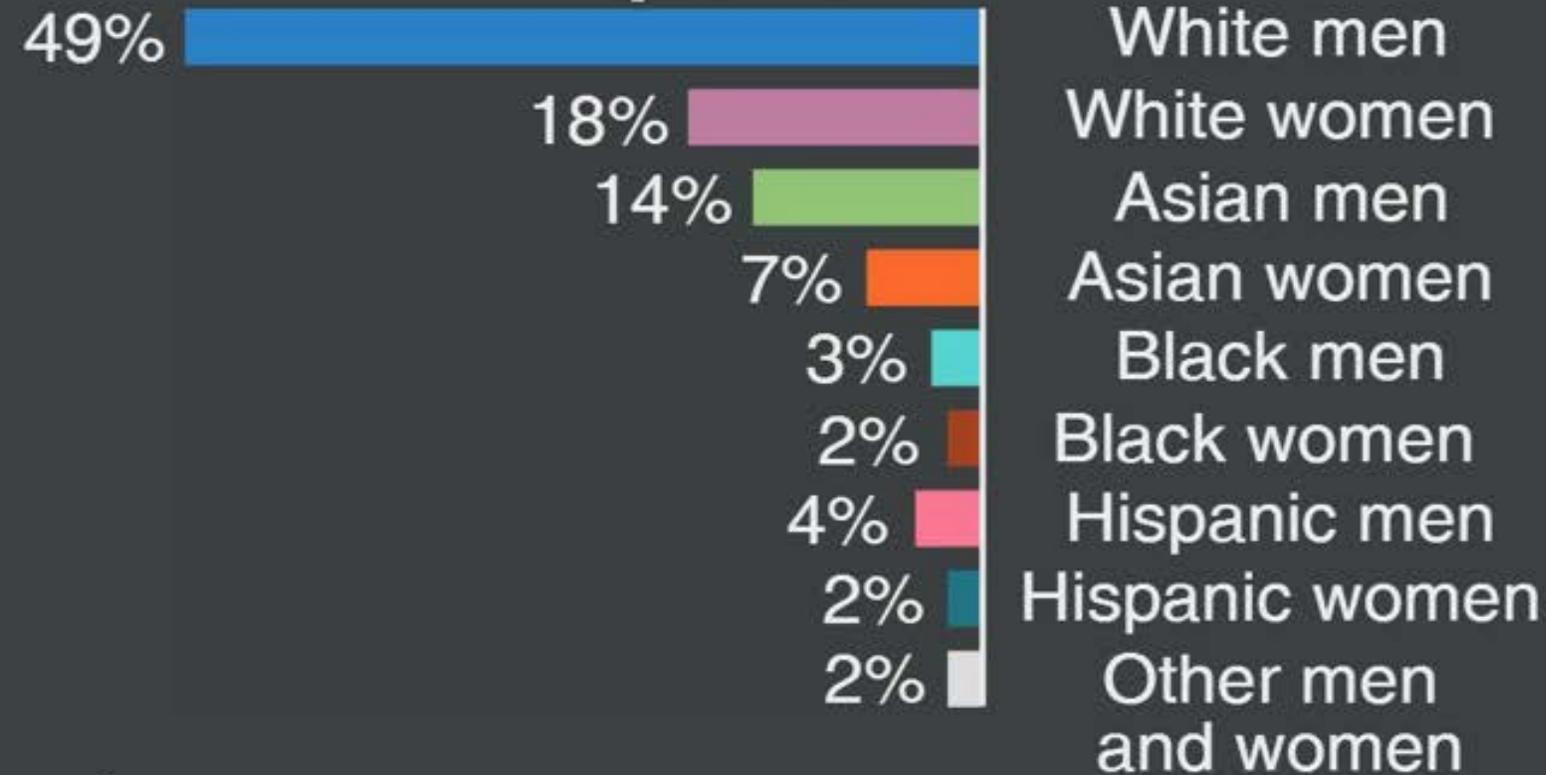


Women, Minorities, and Persons with Disabilities in Science and Engineering: 2017

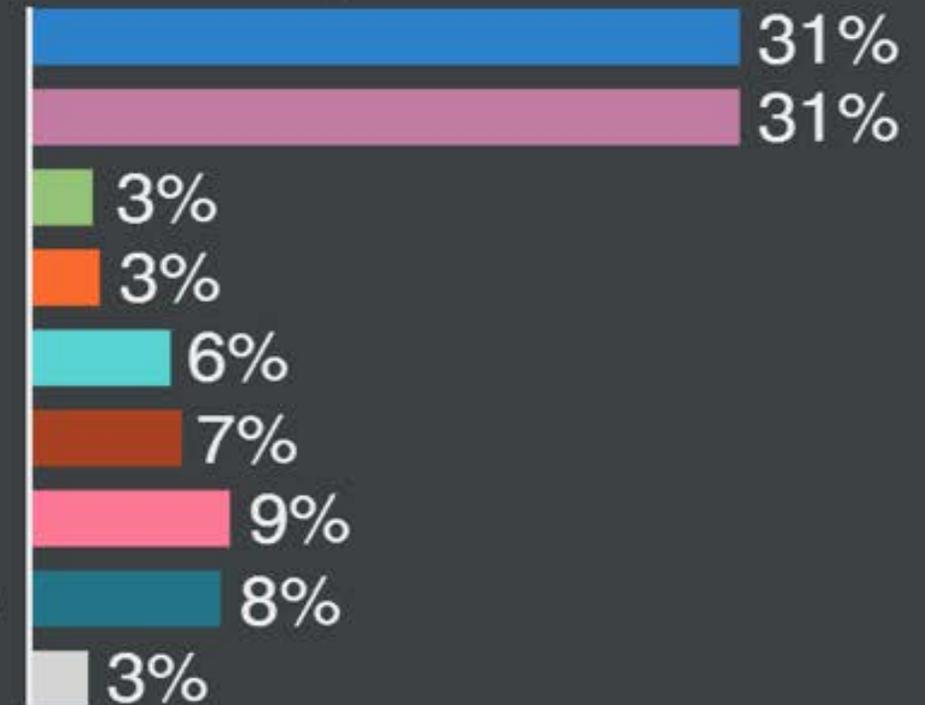
Workers in science and engineering occupations

In 2015, women, blacks, and Hispanics were underrepresented in science and engineering (S&E) occupations as compared to the U.S. general population.

S&E Occupations



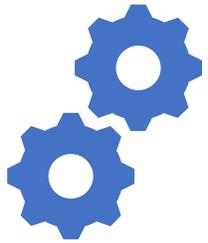
U.S. Population





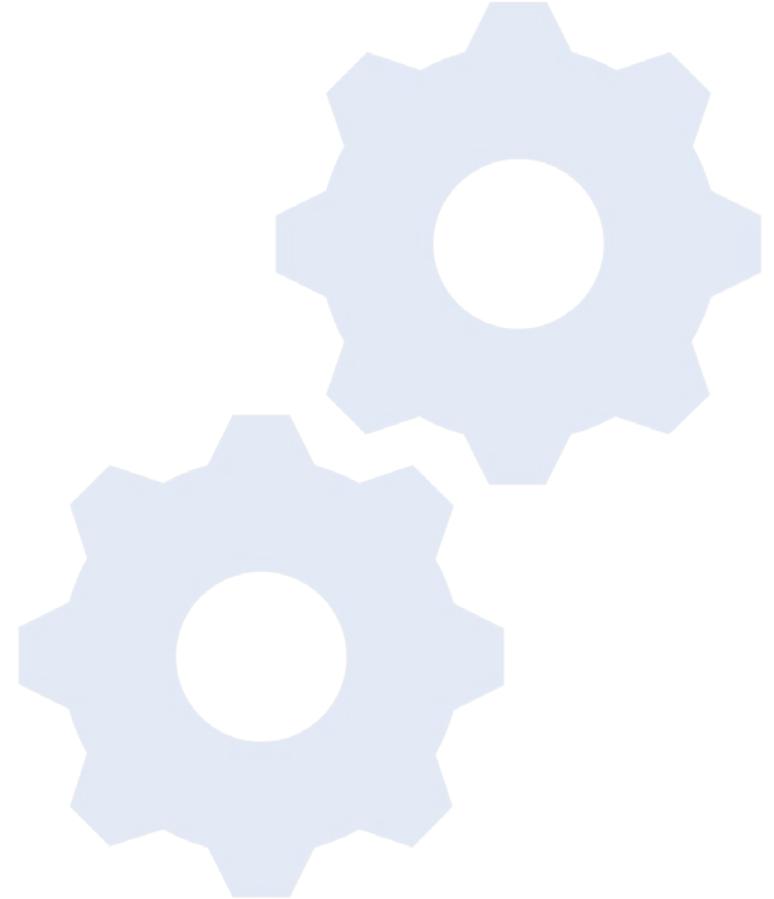
Why Diversity Matters

- Science and innovation imperative
- Workforce imperative
- Economic imperative
- Moral imperative



Great Minds Do Not Think Alike!

Deep-level diversity leads to more and
different ideas





The Science and Innovation Imperative



Diverse Teams
stimulate
Creativity

- Relationship is not linear
- What matters most is “psychological” (e.g., personality, values, abilities) diversity
- Too much in small groups leads to conflict
- Works best with good leadership
- Biggest “lift” is in implementing the creative ideas

How Diversity Can Drive Innovation

by Sylvia Ann Hewlett, Melinda Marshall, and Laura Sherbin

FROM THE DECEMBER 2013 ISSUE

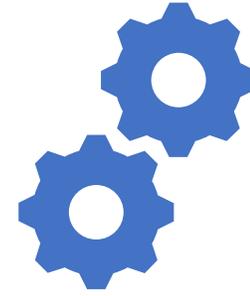
By correlating diversity in leadership with market outcomes as reported by respondents, we learned that companies with 2-D diversity out-innovate and out-perform others. Employees at these companies are 45% likelier to report that their firm's market share grew over the previous year and 70% likelier to report that the firm captured a new market.

2-D Diversity: "a nationally representative survey of 1,800 professionals, 40 case studies, and numerous focus groups and interviews, we scrutinized two kinds of diversity: inherent and acquired ... We refer to companies whose leaders exhibit at least three inherent and three acquired diversity traits as having two-dimensional diversity."

The Workforce Imperative

--<https://blog.roikoi.com/why-a-business-imperative-div>

- Workforce is stronger, bigger and better with more and different people in it
- Inclusivity fosters acceptance and tolerance, leading to a decrease in discrimination, that in turn decreases turnover.



The Economic Imperative

- Achieving diversity leads to an increase in our nation's human capital, thereby promoting a stronger workforce and more engaged citizenry
- Impacts on the Organization (e.g., risk management, financial loss, turnover)
- U.S. Equal Employment Opportunity Commission (EEOC)



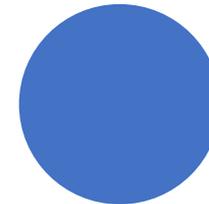


The Moral Imperative

It is the Right Thing to Do!

- “We hold these truths to be self-evident that all men are created equal...”
 - Equal Pay Act of 1963
 - Civil Rights Act of 1964, Title VII & CRA 1991
 - The Pregnancy Discrimination Act
 - The Age Discrimination Act of 1967
 - Title I of the Americans with Disabilities Act 1990
 - The Genetic Information Nondiscrimination Act of 2008

U.S. Always Aspires to a
Meritocracy...



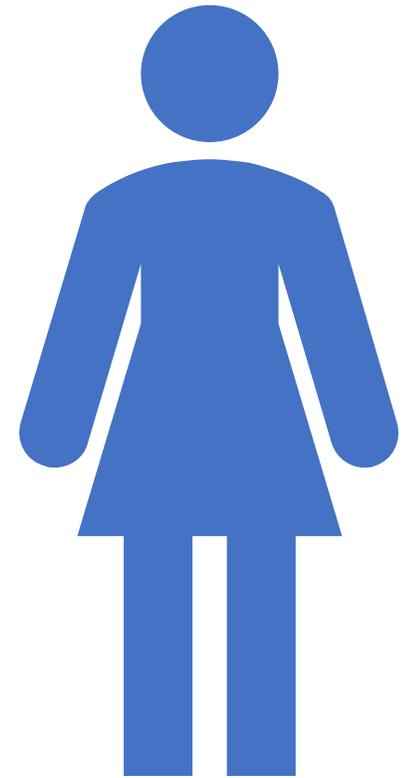
Diversity Matters for Everyone



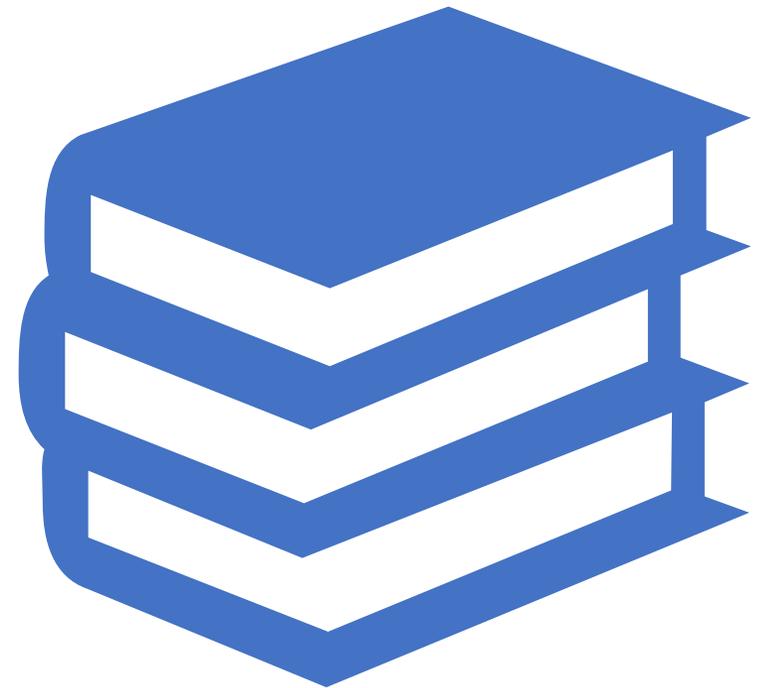
Examples of Research on Diversity

- Groups of diverse problem solvers outperform groups of high-ability problem solvers (Hong & Page, 2004, PNAS).
- Colorblind approaches to racial attitude interventions are less effective in reducing bias than those with explicit reference to prejudice (e.g., Richeson & Nussbaum, 2003).
- Diversity training does not lead to greater diversity in senior management (Dobbin, F. et al. 2010 ASR).
- Assertiveness training does not improve women's ability to negotiate (Babcock, 2003, 2005, 2007).

Women, Negotiation
and Assertiveness
training

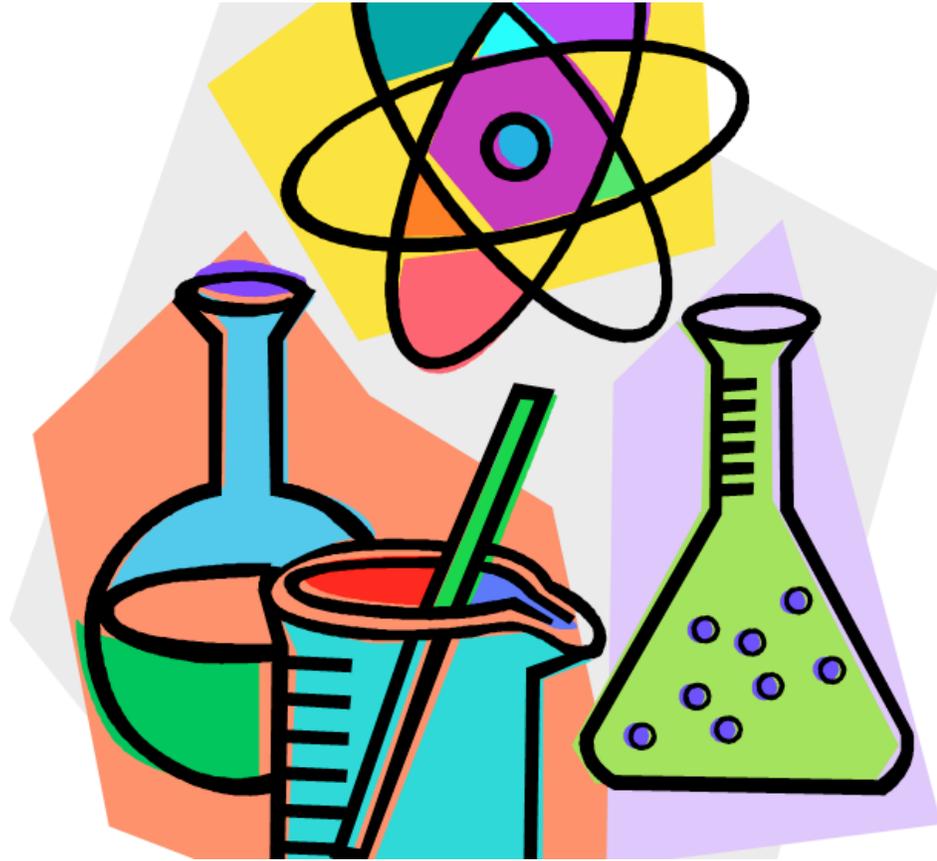


On the Limits of Diversity Training





Groups of
Diverse Problem-
Solvers Can Out-
Perform Groups
of High-Ability
Problem Solvers



The Science of Broadening Participation (SBP)

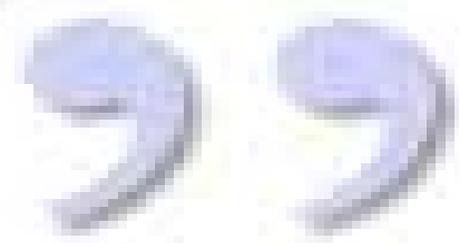
“Integrative, interdisciplinary field of inquiry based upon the theoretical perspectives as well as the methods and analytic tools of the social sciences and education research to advance understanding of practical, effective and successful efforts aimed at broadening participation in STEM.”

*The Science of
Broadening
Participation
Provides
Answers to
Questions
About...*

- Issues of access, inclusion and retention by documenting the inequitable distribution of educational and economic opportunities.
- Information at all levels of analysis of behavior including the individual, group and societal.
- Collaboration between SBE scientists and those in the natural and physical sciences engaged BP efforts.
- What works and what doesn't work to reduce disparity in STEM participation!



*It is not our differences
that divide us. It is our
inability to recognize,
accept, and celebrate
those differences.*





Thank you!

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Directorate for Social, Behavioral and Economic
Sciences (SBE)

<http://www.nsf.gov/dir/index.jsp?org=SBE>

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