UNCONSCIOUS BIAS IN ACADEMIA

BROOKHAVEN NATIONAL LABORATORY

WAYNE A. I. FREDERICK, M.D., MBA, FACS
President
Howard University

June 6, 2016
ACADEMIC MEDICINE YESTERDAY
MEDICAL EDUCATION IN THE UNITED STATES AND CANADA
A REPORT TO THE CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING
BY ABRAHAM FLEXNER
WITH AN INTRODUCTION BY HENRY A. Pritchett PRESIDENT OF THE FOUNDATION

FLEXNER REPORT
Entrance requirements and adherence to them
The size and training of the faculty
The sum and allocation of endowment and fees to support the institution
The adequacy and quality of the laboratories as well as the training and qualifications of the laboratory instructors
The relationships between the school and its associated hospitals.
His intent was to reduce the physician supply
He called for reducing the number of schools to 31
Annual output of physicians from 4,442 to 2,000
The number of medical schools decreased to 85
The number of students from 28,142 to 13,798
The percentage of schools requiring two years of college for admission rose from 3 to 92
“it is clear that [women] show a decreasing inclination”
“the seven medical schools for negroes” be reduced to two
Blacks, being “a potential source of infection and contagion,” needed their own physicians.
“hygiene rather than surgery” be “strongly accentuated” in these schools.
By 1923, only two medical schools for blacks remained.
Between 1920 and 1964, less than three percent of students entering American medical schools were black.
Abraham Flexner was a member of Howard University’s Board of Trustees from 1930-1936. He served as board chairman (1932-35).
FIRST FACULTY MEMBERS
HOWARD UNIVERSITY COLLEGE OF MEDICINE

(Front Row: L-R) A. T. Augusta, G. S. Palmer, R. Reyburn, C. B. Purvis, P. H. Strong
(Back Row: L-R) S. L. Loomis, O. O. Howard, J. T. Johnson.
UNCONCIOUS BIAS
TYPES OF BIAS

- SEXISM
- RACISM
- ELITISM
- SPECIALTY BIAS
- CONSCIOUS OR UNCONSCIOUS
UNCONSCIOUS/IMPLICIT RACE AND CLASS BIAS AMONG FIRST YEAR MEDICAL STUDENTS

Findings from a study conducted by Cornwell et al for the Journal of the American Medical Association
• 211 total participants
• 202 completed entire survey
• 52% Females
RACE AND ETHNICITY OF PARTICIPANTS

- African American: 6.4%
- Asian: 30.9%
- Latino: 5.9%
- Native American: 0.0%
- White: 53.7%
- Other: 3.2%
AGE DISTRIBUTION OF PARTICIPANTS

- 21 or Younger: 16.0%
- 22 to 25: 76.8%
- 26 to 29: 5.7%
- 30 to 33: 1.0%
- 34 to 37: 0.5%
- 38 or Older: 0.0%
EXPLICIT VS. IMPLICIT
RACE PREFERENCES

\[ \rho = -0.08 \]

Preferences:
- **Pretends Black**: 54.4%
- **Pretends White**: 29.0%

Bars represent:
- **Explicit**
- **Implicit**

- Strong
- Moderate
- Slight
- Both Equally
- Slight
EXPLICIT AND IMPLICIT PREFERENCES
LOWER VS. UPPER CLASS

Prefers Lower

2.6% 0.0% 2.1% 10.4% 9.9% 16.1% 4.1%

Prefers Upper

36.8% 31.6% 22.9% 53.1%

Explicit
Implicit

ρ = -0.43
CONCLUSION

• A majority of medical students exhibit an unconscious bias preferring Whites and Upper Social class

• Unlike data on physicians, these biases do not impact their assessment of surgical patients
IMPLICATIONS

Further studies are needed to determine if experiences during training contribute to potential unconscious differential treatment of patients by physicians.
BIAS IN RESEARCH FUNDING
In the August 19th issue of *Science* an article documented that between 2000 and 2006 minority scientists were less likely to receive NIH funding.

- SCIENCE VOL 333 19 AUGUST 2011 1015-19
The observations of Ginther et al. suggest the presence of an “inverse Matthew effect,” that is, residual cultural biases may have disproportionate adverse consequences on minority subgroups of our scientific community.”
Poor, black and Hispanic children are becoming increasingly isolated from their white, affluent peers in the nation’s public schools, according to new federal data showing that the number of high-poverty schools serving primarily black and brown students more than doubled between 2001 and 2014.

The data was released by the Government Accountability Office last month, 62 years to the day after the Supreme Court decided that segregated schools are “inherently unequal” and therefore unconstitutional.
Figure 1: Changes in the Percentage of High-Poverty Schools Comprised of Mostly Black or Hispanic Students, Selected School Years from 2000-01 to 2013-14

Percentage of schools

2000-01  2005-06  2010-11  2013-14

Low-poverty and 0 to 25 percent Black or Hispanic schools
All other schools
High-poverty and 75 to 100 percent Black or Hispanic schools

Source: GAO analysis of Department of Education, Common Core of Data, 2000-14. | GAO-16-345

Notes: “Low-poverty” refers to schools in which 0 to 25 percent of the students were eligible for free or reduced-price lunch. “High-poverty” refers to schools in which 75 to 100 percent of the students were eligible for free or reduced-price lunch. “All other schools” refers to schools that fall outside of the other two categories of schools in this figure. This figure excludes schools that did not report (1) free or reduced-price school lunch, which we used as a proxy to categorize the poverty level of the school or (2) the number of Black or Hispanic students, which we used to categorize the level of Black or Hispanic students in the school.
We all have biases.....

- **Well-intended people** may have no idea about the unconscious process that they use to make decisions about people who are different from them.
- Not a good-people vs. bad-people paradigm

Unconscious Bias Training will be offered to APT and Search committees as part of the HU ADVANCE-IT cooperative agreement with the National Science Foundation (NSF)

Cook-Ross (11/2014-1/14/2015) or Language & Culture Worldwide (LCW) have conducted the training on campus
Committed to
Attract, Advance & Retain Howard University’s STEM Women Faculty
Howard University has historically been a leader in the development of Women/Women of Color faculty/leaders in STEM disciplines.

The future faculty we want to recruit and retain expect advancement opportunities/initiatives to be available on campus.

HU ADVANCE-IT is committed to solving the institutional and national problem of Advancement and Leadership of Women in STEM.
HU ADVANCE-IT OBJECTIVES

Education. To foster and sustain a climate and culture which seeks inclusion of all faculty regardless of race, gender, or other target characteristics at the University and in the department

Advocacy. To advance the careers of women faculty in STEM disciplines at Howard University

Empowerment. To position Howard University as a national repository of scholarship on women of color STEM faculty professional experiences, accomplishments, and leadership
DISTINGUISHED HU FACULTY MEMBERS IN 1950

James Nabrit, Jr. (Law), Charles Drew (Medicine), Sterling Brown (English), E. Franklin Frazier (Sociology), Rayford W. Logan (History), Alain LeRoy Locke (Philosophy).
CURRENT DECANAL LEADERSHIP
“College admissions can send compelling messages that both ethical engagement—especially concern for others and the common good—and intellectual engagement are highly important.”
RECOMMENDATIONS FOR RESHAPING THE ADMISSIONS PROCESS IN THREE AREAS

1. Community Engagement and Service

2. Assessing Ethical Engagement and Contributions to Others Across Race, Culture and Class

3. Reducing Undue Achievement Pressure, Redefining Achievement, and Leveling the Playing field for economically diverse students

SOURCE: “Turning the Tide: Inspiring Concern for Others and the Common Good through College Admissions”
HISTORICALLY BLACK COLLEGES AND UNIVERSITIES (HBCUs)
CRITICAL ROLE OF HBCUS

- 312,000 students attend HBCUs
  - Of this population 79% are African American

- HBCUs represent 4% of all four-year institutions

- HBCUs produce 21% of bachelor’s degrees awarded to African Americans

Source: National Center for Education Statistics
HBCUS PRODUCE 28 PERCENT OF AFRICAN AMERICANS IN THE STEM FIELDS*

- 34% of African Americans who received bachelor’s degrees in physics, chemistry, astronomy, mathematics and biology earned them from HBCUs*

- Of the top 10 colleges whose African American graduates went on to get PhDs in science and engineering, the top eight were HBCUs**

*National Center for Education Statistics  
**National Science Foundation
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<th>Rank</th>
<th>Institution</th>
<th>DOCS</th>
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<td>U. California, Berkeley</td>
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<td>U. Illinois, Urbana-Champaign</td>
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<td>U. North Carolina, Chapel Hill</td>
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<td>Tennessee State U.</td>
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<td>Yale U.</td>
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<td>Brown U.</td>
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<td>U. Florida</td>
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<td>Alabama A&amp;M U.</td>
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<td>U. South Carolina, Columbia</td>
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<td>47</td>
<td>Stanford U.</td>
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<td>Texas A&amp;M U.,</td>
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<td>Dillard U.</td>
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<tr>
<td>52</td>
<td>Temple U.</td>
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Total from Harvard, MIT and Stanford combined = 162
## Top 10 U.S. Baccalaureate-Origin Institutions of 2002–11 Black S&E Doctorate Recipients by Field of Doctoral Degree

### Life Sciences
1. Xavier U. LA , 74  
2. **Howard U.**, 61  
3. Hampton U. 57  
4. Spelman C. 55  
5. U. MD, Baltimore County 50  
6. FL A&M U. 46  
7. NC A&T State U. 35  
8. Southern U. 34  
9. Tuskegee U. 32  
10. Morehouse C. 31  
10. Morgan State U. 31

### Physical Sciences
1. **Howard U.** 28  
2. Hampton U. 24  
2. Morehouse C. 24  
4. Spelman C. 23  
5. Southern U. 22  
6. FL Agricultural and Mechanical U. 19  
7. Xavier U. LA 16  
8. Jackson State U. 13  
8. Norfolk State U. 13  
10. AL A&M U. 12  
10. NC A&T State U. 12

### Social Sciences
1. **Howard U.** 109  
2. Spelman C. 84  
3. Hampton U. 61  
4. FL A&M U 52  
5. Harvard U 44  
6. U. CA, Berkeley 42  
7. Morehouse C. 39  
8. U. MD, College Park 37  
8. U. VA 37  
10. Yale U. 36

### Engineering
1. NC A&T State U. 48  
2. FL A&M U 37  
3. Morgan State U. 32  
4. Brown U. 28  
5. GA Institute of Technology 25  
6. **Howard U.** 22  
7. Tuskegee U. 20  
8. U. MI, Ann Arbor 18  
9. U. MD, College Park 16  
9. U. MD, Baltimore County 16

Source: National Science Foundation
HU PROGRAMS IMPACTING THE HIGHER ED PIPELINE
HOWARD UNIVERSITY MIDDLE SCHOOL OF MATHEMATICS AND SCIENCE

• Completely non-selective middle school

• Open to all students, regardless past academic performance, social-economic condition, or learning style

• While achievement outcomes are on par or above national standards, 2/3 of students enter performing below grade level

• Since it was founded in 2005, (MS)$^2$’s performance on the state-mandated standardized assessments has consistently been in the top 5% for the District of Columbia.

Student demographic profile
- 95% African American
- 5% Latino/Hispanic
College Enrollment

95% of the class of 2008 attended college
(two finished high school one year early)

- (MS)² students in the graduating class of 2008 were commonly accepted by 4 or 5 colleges and universities.

- Nearly 50 percent (MS)² graduates from the Class of 2009 are majoring in a STEM field.

- (MS)² graduates had scholarship offers from more than one school. Total monetary and scholarship offers ranged from $10,000 to $200,000.
RECOMMENDATIONS TO DEVELOP THE PIPELINE

- **Feeder Programs**, beginning in Middle Schools – e.g. support for and refocus of science fair projects toward dental research. Service assignments at dental schools.

- **Better undergraduate dental clubs**, with structured learning in DAT and dental basic sciences core areas.

- **IPE** - Restructuring of dental learning environment to accommodate provision of comprehensive care with better follow-up and prevention.

- **Mentoring** – with concern for diversity at less diverse dental colleges.

- **Academic Reinforcement** – funding and better models to identify those moving toward the safety net.

- Collaborative Student Exchange Programs.
Federal funding that has been used to help increase Minority Applicants who would otherwise be discouraged because of financial or social barriers

- The Special Health Careers Opportunity Grant
- Health Careers Opportunity Grant

New approaches to attract minority students to STEM education

- Inform students earlier about careers in oral healthcare
  - BS/MD, BS/DDS, MD/PhD Programs
- Strengthen efforts of K-12 education
  - Howard Middle School (STEM)

Community outreach

- Howard College of Dentistry opens its doors to 325 Washington DC public school children for the annual “Give Kids A Smile Day”
The PHSEP is designed to prepare under-represented minority students of Howard University and other HBCU partner universities for a four-week intensive program at Howard University campus, Washington, DC.

This program develops and enhances the academic skills necessary for success in the health professional schools.

Students meet with various academic mentors, physicians, dentists and scientists at HU campus and other site visits to better understand the health professions and the health policymaking process to become effective healthcare and community leaders.
Improving Access

Health Careers Opportunity Pipeline Programs to Increase Diversity

Although admissions policies were a primary strategy for increasing student diversity among health professions, other important approaches include diversifying the applicant pool with outreach and recruitment programs.

- Summer Medical Dental Enrichment Program (SMDEP)
- Pre-Health Summer Enrichment Program (PHSEP)
- Advanced College Summer Enrichment Program (ACSEP)
INTER-PROFESSIONAL EDUCATION
Inter-professional Education: Two or more students from two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes.

Inter-professional Collaborative Practice: Multiple health workers from different professional backgrounds work together with patients, families, caregivers, and communities to deliver the highest quality of care.

Inter-professional Teamwork: The levels of cooperation, coordination and collaboration characterizing relationships between professions delivering patient-centered care.

SOURCE: WHO, 2010
IPE RESOURCES AT HOWARD UNIVERSITY

State-of-the-Art Simulation Center
- GOAL: Promote IPE and patient safety through simulation education.

Introduction to Health Care Ethics Course
- GOAL: Develop healthcare professionals who work as an interdisciplinary team to resolve ethical issues.

Institute for Healthcare Improvement (IHI) Open School - Interprofessional Chapter at Howard University organized in 2013
- GOAL: Advance health care & patient safety competencies in the next generation of healthcare providers nationwide
The Center is specifically designed to promote inter-professional simulation-based education for all levels of healthcare professionals using the latest technology and equipment.
INTER-PROFESSIONAL EDUCATION COLLABORATION SATURDAY COLLEGE FOR KIDS – HEALTH SCIENCES SCREENING

Oral mechanism  Oral Health Education  Body Mass Index  Nutrition

Hearing  Speech and Language  Orthodontics  Pediatric Dentistry

OFFICE OF THE PRESIDENT
Equality doesn’t mean Justice

Equality

Justice
“EXCELLENCE OF PERFORMANCE WILL TRANSCEND ARTIFICIAL BARRIERS CREATED BY MAN”
HOWARD UNIVERSITY’S 148TH COMMENCEMENT CONVOCATION
FUTURE OF ACADEMIA
FUTURE OF ACADEMIA