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From ACS Industry Member Programs

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Career Consultant Directory



- ACS Member-exclusive program that allows you to arrange a one-on-one appointment with a certified ACS Career Consultant.
- Consultants provide personalized career advice to ACS Members.
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Virtual Office Hours: LinkedIn Profiles for Chemists



Thursday, Feb. 3rd @12pm ET

- Optimize your LinkedIn profile
- How to attract new career opportunities
- Best practices of virtual networking

Register @ www.acs.org/careerconsulting

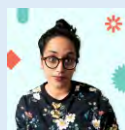
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A science podcast by the **American Chemical Society** about things small in size but **BIG** in impact.



Sam Jones, PhD
Science Writer & Exec Producer



Deboki Chakravarti, PhD
Science Writer & Co-Host

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Get in touch with the Office of Diversity, Equity, Inclusion & Respect

The Office of Diversity, Equity, Inclusion & Respect (DEIR) is the central hub at the American Chemical Society that coordinates, supports, and guides all efforts by staff, members, and governance toward Strategic Goal 5, "Embrace and Advance Inclusion in Chemistry." The Office of DEIR at ACS is committed to empowering everyone, irrespective of lived experience and intersectionality of identities, to fully participate in the chemistry enterprise. The Office of DEIR welcomes comments, suggestions, and questions around issues of diversity, equity, inclusion, and respect from members at any time. Please do not hesitate to reach out to the Office through this form.



Please do not hesitate to reach out to the Office of DEIR at diveristy@acs.org

<https://fs7.formsite.com/acsdiversity/ACSMemberFeedback/index.html>

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The Inclusivity Triangle

Approaching DEIR in Chemistry through Academia, Industry, and Community

Date: Tuesday, February 1 @ 1-2pm ET

Speakers: Pamela M. Leggett-Robinson, PLR Consulting / Sherine Obare, North Carolina A&T State University and UNC Greensboro / Shanina Sanders Johnson, Spelman College

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Co-produced with: ACS Office of Diversity, Equity, Inclusion & Respect

Yes And!

Improving Science Collaboration with Lessons from Improv

Date: Wednesday, February 2 @ 2-3pm ET

Speaker: Matt Grandbois, DuPont Electronics & Industrial
Moderator: Annabelle Lolinco, Iowa State University

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Zebras or Horses?

How a False Sense of Security Can Lead to Lab Accidents

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Speaker: Mary Beth Mulcahy, ACS Chemical Health & Safety
Moderator: Ralph Stuart, Keene State College

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What You Will Learn:

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THIS ACS WEBINAR IS WILL BEGIN SHORTLY... SAY HELLO IN THE QUESTIONS WINDOW!

Can Medical Instruments be Racist?

**ROGER TURNER**

Research Curator, Science History Institute

**BILL TSUZYSKI**

Principal, The Unami Group LLC

Presentation slides are available now! The edited recording will be made available as soon as possible.

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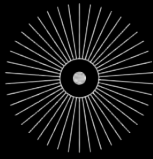
Can Medical Instruments be Racist?

Roger Turner

Research Curator

Science History Institute

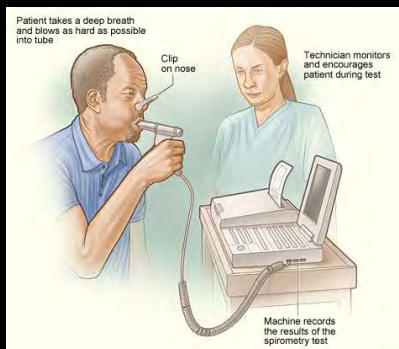
Science
History
Institute



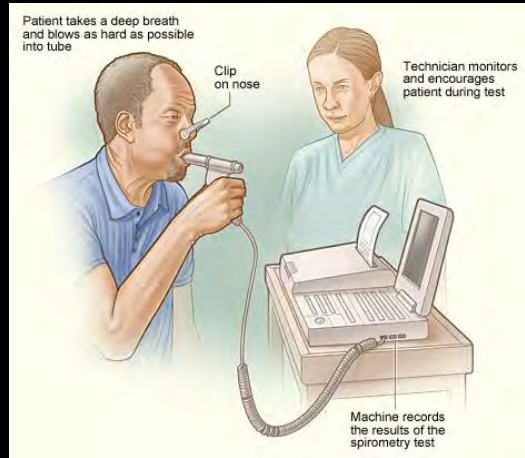
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315 Chestnut Street
Philadelphia, PA 19106

Pulse Oximeter and Spirometer: Instruments that matter today, with biases rooted in history



Spirometry



Dr. Lundy Braun, Ph.D.
Professor of Medical Science
and Professor of Africana
Studies, Brown University



*The Surprising Career of the Spirometer
from Plantation to Genetics*

LUNDY BRAUN



8. (Optional) For non-Caucasian subjects, press ADJUST PRED.

ADULT FEMALES **AGE 25 YEARS**

FEV ₁ (litres)	2.5	5	7.5	10
1.45	2.5	3.4	4.3	5.2
1.50	2.7	3.6	4.5	5.4
1.55	2.9	3.8	4.7	5.6
1.60	3.1	4.0	4.9	5.8
1.65	3.4	4.3	5.2	6.1
1.70	3.6	4.5	5.4	6.3
1.75	3.8	4.7	5.6	6.5
1.80	4.0	4.9	5.8	6.7

Read predicted normal values opposite patient's height

METRES	INCHES
1.45	2.6
1.50	3.1
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1.70	4.0
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FEMALES

Boehringer Ingelheim

Ethnic factors for children: The lung size of children of other ethnic groups is in most instances less than that of European descent. The difference is of the order of 20% for Afro/Caribbean children and 10% for most other groups.

GIRLS

HEIGHT	FEV ₁	FER	PEFR
Metres 1.80	71	10	1.1
FEV ₁ 0.37	85	12	1.3
FVC 1.88	126	16	1.7

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BOYS

HEIGHT	FEV ₁	FER	PEFR
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FEV ₁ 0.41	85	12	1.3
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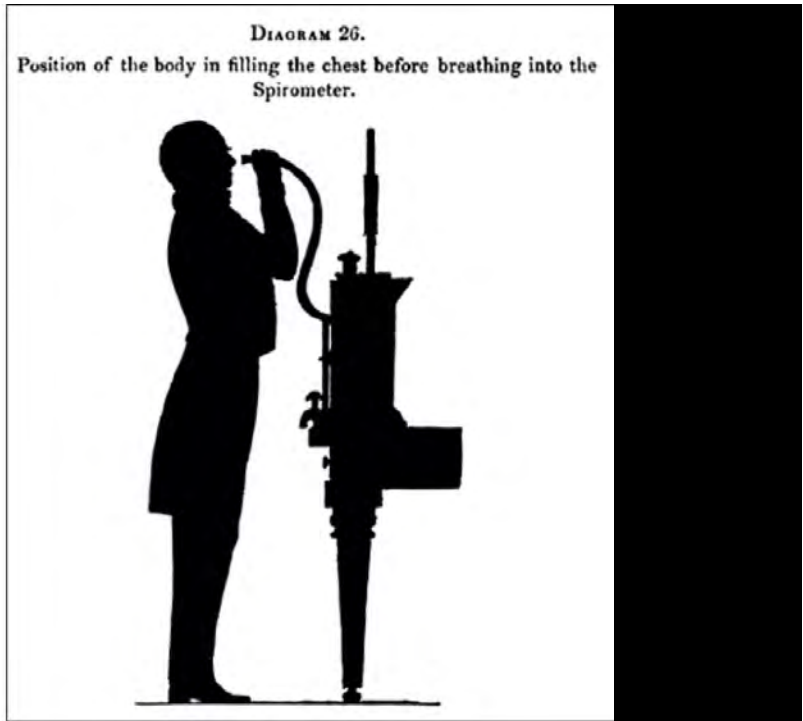
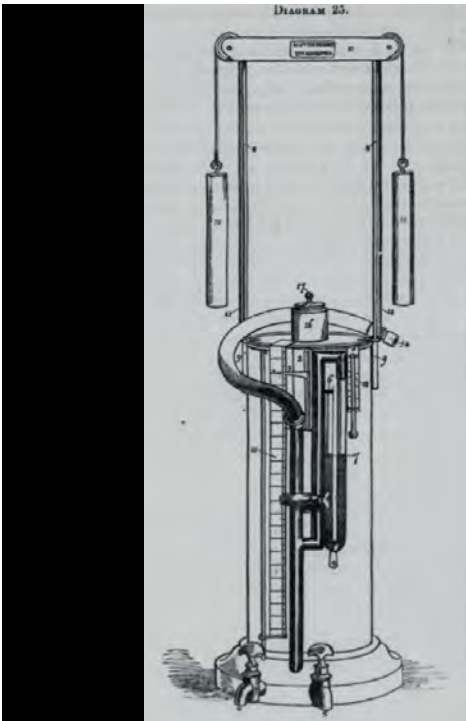
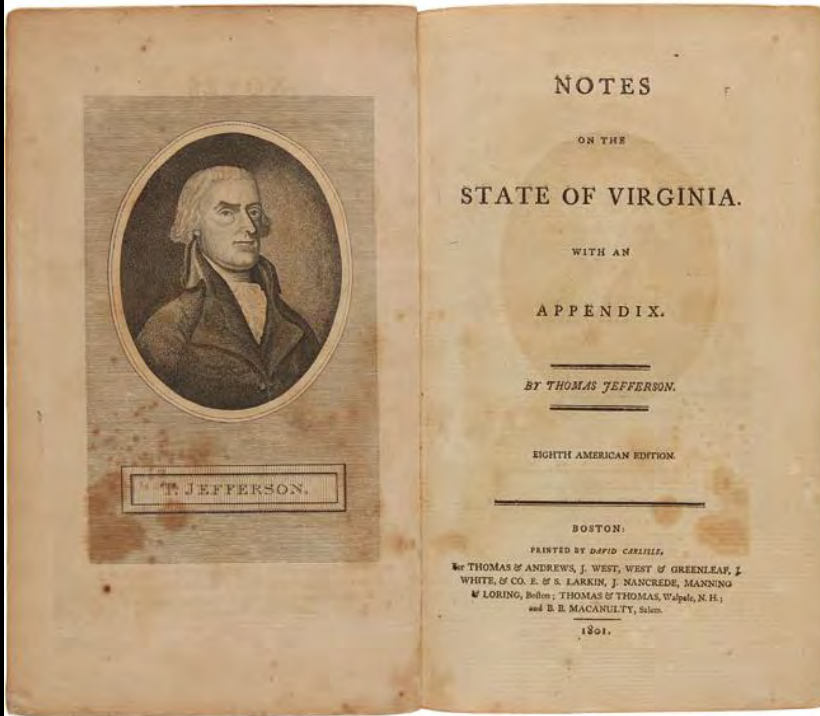
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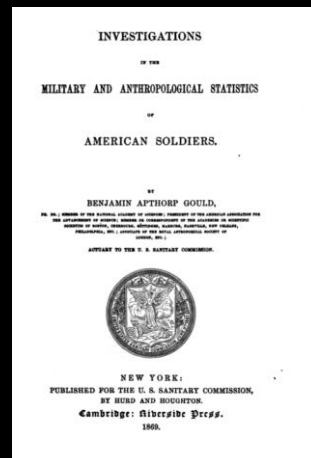
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Samuel A Cartwright
Enslaver and Physician

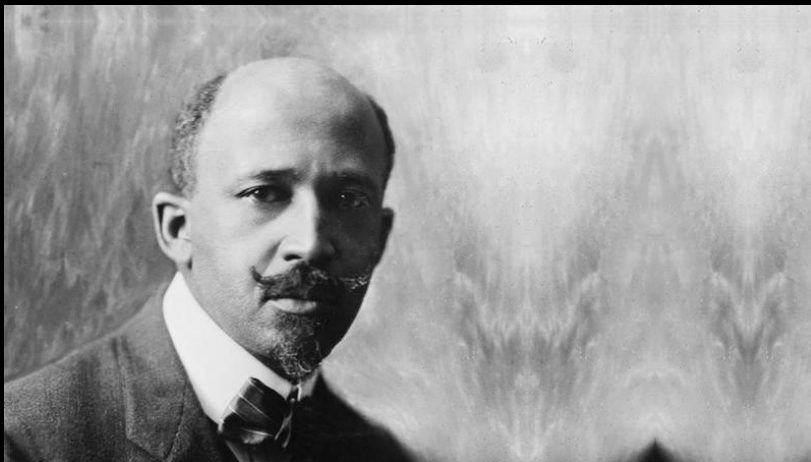
Benjamin Aphthrop Gould and US Sanitary Commission

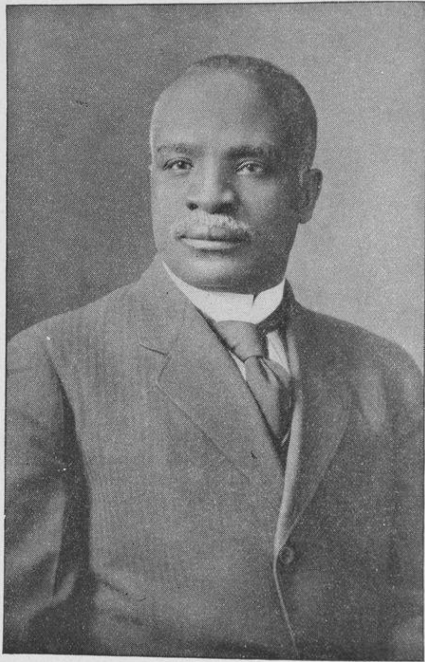




Frederick Hoffman, chief
statistician for Prudential
Life Insurance Co

Dissenting Voices: W.E.B. Du Bois



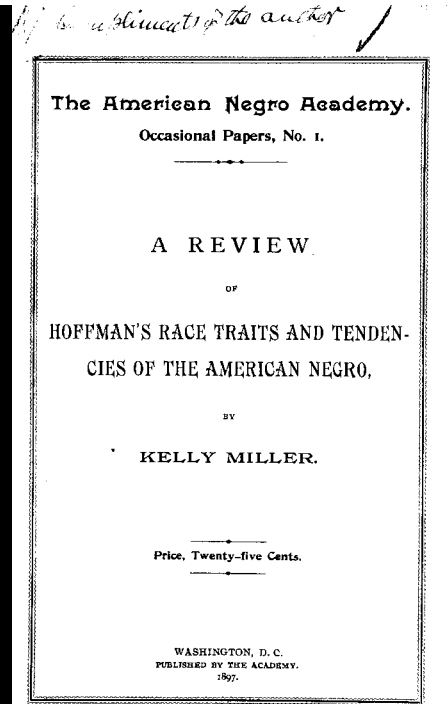


KELLY MILLER, A. M., LL. D.
Dean of the College of Arts and Sciences, Howard University, Washington D. C.

Kelly Miller
Mathematician and Sociologist
at Howard University

Portrait courtesy of Schomburg
Center for Research in Black
Culture, NY Public Library.

Review of Race Traits image via
Library of Congress.



Pulse Oximetry





Dr. Amy Moran Thomas, Ph.D
Associate Professor of Anthropology
Massachusetts Institute of Technology



Oximetry: Roots in Extreme Environments and Aerospace Medicine

Hypoxia Warning System Brochure
Beckman Instruments (c. 1963).
Science History Institute Digital Collections

Ear Oximeters, 1930s-1940s



Karl Matthes



Glenn Millikan



Glenn Millikan (left), Robert Millikan (center) on Mount Whitney, 1925.
Image courtesy Caltech Archives.



Oximetry: Roots in Anesthesiology and Clinical Medicine

Beckman Model 160 Physiological Gas Analyzer
and Modular Cuvette (c 1960s)
Science History Institute Digital Collections

Takuo Aoyagi and the Contemporary Pulse Oximeter



Nihon Kohdon Oximeter OLV-5100 (1975)

Can Medical Instruments be Racist?

- Racism = prejudice + power

How Oximetry is Coupled to Power



What to Do?

Solutions and Responses

Increase Awareness of Built-in Bias

THE LANCET
Respiratory Medicine

COMMENT | [VOLUME 9, ISSUE 2, P124-125, FEBRUARY 01, 2021](#)

Could routine race-adjustment of spirometers exacerbate racial disparities in COVID-19 recovery?

Meredith A Anderson • Atul Malhotra • Amy L Non 

Published: December 10, 2020 • DOI: [https://doi.org/10.1016/S2213-2600\(20\)30571-3](https://doi.org/10.1016/S2213-2600(20)30571-3)  Check for updates

Acknowledge Racism in Sci & Tech Policy



Dr. Alondra Nelson, Deputy Directory of OSTP

Legislation

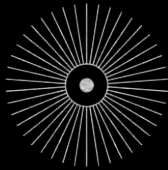


Build instruments for
the full range of
bodies



Thank you!

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ASK YOUR QUESTIONS AND MAKE YOUR COMMENTS IN THE QUESTIONS PANEL NOW!

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Yes And!

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