

# SCIENCE AND RACE: HISTORY, USE, AND ABUSE

Class 3 – OCTOBER 26, 2016

## GENETICS AND RACE

Race has no genetic basis. Not one characteristic, trait, or gene distinguishes all the members of one society from another. Yet, discussions of genes and race have come to the forefront of discussions of the origin of modern human diversity. Public understanding of at-home genetic testing kits have led some to believe that DNA test results can demonstrate the biological validity of race; that it is objectively discoverable and meaningful. During this session, we will discuss the nature of human genetic diversity and the way that genetic data are used in conversations about race in human populations.

### CLASS SCHEDULE:

<b>6:30 – 6:35 PM</b>	Introduction <b>Dan Rahimi</b> , Executive Director of Galleries, Penn Museum
<b>6:35 – 6:45 PM</b>	Genetics Primer Presentation with <b>Raquel Fleskes</b>
<b>6:45 – 7:10 PM</b>	Collections Workshop with <b>Janet Monge</b>
<b>7:10 – 7:15 PM</b>	Workshop Q&A
<b>7:10 – 7:30 PM</b>	Short Break
<b>7:30 – 8:30 PM</b>	Panel discussion with: <b>Fatimah Jackson, Ph.D.</b> , <i>Howard University</i> <b>Amade M'charek, Ph.D.</b> , <i>University of Amsterdam</i> <b>Theodore Schurr, Ph.D.</b> , <i>University of Pennsylvania</i> <b>Quayshawn Spencer, Ph.D.</b> , <i>University of Pennsylvania</i> <b>Sarah Tishkoff, Ph.D.</b> , <i>University of Pennsylvania</i> <b>Mike Adams</b> , <i>WHYY</i> , <i>Moderator</i>
<b>8:30 – 8:45 PM</b>	Q&A
<b>8:45 – 9:00 PM</b>	Closing remarks with <b>Mike Adams</b> and <b>panelists</b>

This class will be live-streamed, and class recordings will be posted at

[www.penn.museum/sites/pmclassroom](http://www.penn.museum/sites/pmclassroom)



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### MEET THE SPEAKERS:



#### **Fatimah Jackson, Ph.D.**

*Professor of Biology, Director of the W. Montague Cobb Research Laboratory, Howard University*

Dr. Jackson received her Ph.D., M.A., and B.A. (cum laude with Distinction in all Subjects) from Cornell University. Her doctoral dissertation research was on The Relationship of Certain Genetic Traits to the Incidence and Intensity of Malaria in Liberia, West Africa. She has conducted research on: 1.) Human-plant coevolution, particularly the influence of phytochemicals on human metabolic effects and evolutionary processes and 2.) Population substructure in peoples of African descent, developing Ethnogenetic Layering as a computational tool to identify human microethnic groups and differential expressions of health disparities. Trained as a human biologist, Dr. Jackson has published extensively in such journals as Human Biology, Biochemical Medicine and Metabolic Biology, Journal of the National Medical Association, American Journal of Human Biology, Annals of Human Biology, BMC Biology, and most recently the American Journal of Public Health. In 2012, she was Coined by Rear Admiral Dr. Helena Mishoe, National Institutes of Health, NHLBI and US Public Health Service.



#### **Amade M'charek, Ph.D.**

*Professor of Anthropology of Science, Department of Anthropology, University of Amsterdam*

Dr. Amade M'charek's research has focused on the social aspects of various biomedical technologies and practices, such as human genetic diversity, diversity in medical practice, and forensic genetics. She has conducted ethnographies of scientific or clinical practices looking at the entwinement of technologies and the objects of study/intervention. Her most recent research is on face-making and race-making in forensic identification (funded by a five-year ERC consolidator grant). In this study, she and her colleagues examine how technologies of face-making, aimed at the identification of a suspect or a victim, is also involved in race-making. The primary research aim is to develop methods and theoretical concepts with which to understand the simultaneous presence and absence of race in science and society. By taking into account biological factors, this research project will go beyond the social constructivist paradigm and unravel the ways in which 'race' is shaped as a set of relations between the biological, the social and the technical.



#### **Theodore Schurr, Ph.D.**

*Professor of Anthropology, University of Pennsylvania  
Consulting Curator in Physical Anthropology and American Sections, Penn Museum*

For the past twenty-five years, Schurr has investigated the genetic prehistory of Asia and the Americas through studies of mtDNA, Y-chromosome and autosomal DNA variation in Asian, Siberian and Native American populations. Current projects include studies of genetic diversity in indigenous populations of Canada, the United States, Mexico and the Caribbean. His research group is also investigating the population history of Georgia (Caucasus), Pakistan and Kazakhstan through our collaborative genetic studies in those countries.

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## MEET THE SPEAKERS:



### Quayshawn Spencer, Ph.D.

*Assistant Professor of Philosophy, University of Pennsylvania*

Spencer is an analytic philosopher that focuses on Philosophy of Science, Philosophy of Biology, and Philosophy of Race. His interests in philosophy lie in the metaphysics of race, the nature of biological populations, and the natural kind realism debate.



### Sarah Tishkoff, Ph.D.

*David and Lyn Silfen University Professor in Genetics and Biology, University of Pennsylvania*

Dr. Tishkoff studies genomic and phenotypic variation in ethnically diverse Africans. Her research combines field work, laboratory research, and computational methods to examine African population history and how genetic variation can affect a wide range of practical issues – for example, why humans have different susceptibility to disease, how they metabolize drugs, and how they adapt through evolution. She sits on the editorial boards at Genome Research; Evolution, Medicine, and Public Health; Molecular Biology and Evolution; G3 (Genes, Genomes, and Genetics). Her research is supported by grants from the National Institutes of Health and the National Science Foundation.



### Janet Monge, Ph.D.

*Curator-in-Charge of the Physical, Anthropology Section in the Penn Museum and Adjunct Professor in Anthropology, University of Pennsylvania*

The Museum collection is extensive and includes both historic and archaeological skeletal collections with all skeletons 3D digitized using computed tomography. Monge's research interests include human evolution, human skeletal biology, bioarchaeology, and life history/paleodemography. In addition, she offers research experiences in applied anthropology within forensic science and museum studies (emphasizing NAGPRA) and teaches classes in all of these topical areas. She is Director of the Museum's Fossil Casting Program that produces over 3000 bones representing all phases of human and primate evolution—fossil casts and human skeletal materials form the core of all of her classes and are integrated into all aspects of graduate student education.

WORKSHOP MODERATOR



### Mike Adams

*Digital News Director, WHYY  
Moderator, Genetics and Race*

Michael Adams is the Director of Digital News For WHYY. He is also the Managing Partner of Bridge View Media, a Philadelphia based media content creation and management firm servicing clients internationally. Throughout his long media career in television, radio, film and the Internet, he specialized in content development and distribution in both news and entertainment and was recognized with multiple Emmy awards, Edward R. Murrow awards and Associated Press and UPI awards for his work. His career has been filled with projects that pushed the boundaries of media creation and innovation, many of which helped shape the landscape we see today. He has also been a longtime advocate of civic journalism, allowing citizens to participate in shaping how news is covered and disseminated.

MODERATOR



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## GENETICS AND RACE

### READING LIST:

*Continue your exploration of this topic with the following readings, recommended by our panelists.*

#### ACADEMIC:

##### Philosophy of Race Meets Population Genetics

By: Quayshawn Spencer

<http://www.sciencedirect.com/science/article/pii/S1369848615000655>

##### A Radical Solution to the Race Problem

By: Quayshawn Spencer

<https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWVpbnxxbmpzcGVuY2VyfGd4OjdmYTdhOTBjN2ZIN2YmJQ>

##### Human Skin Pigmentation, Migration and Disease Susceptibility

By: Nina G. Jablonski and George Chaplin

[http://sites.psu.edu/ninajablonski/wp-content/uploads/sites/10224/2014/02/Jablonski.2012.Phil.\\_Trans.\\_Roy.\\_Soc.\\_B.785ff.pdf](http://sites.psu.edu/ninajablonski/wp-content/uploads/sites/10224/2014/02/Jablonski.2012.Phil._Trans._Roy._Soc._B.785ff.pdf)

##### The Evolution of Human Skin Colouration and its Relevance to Health in the Modern World

By: Nina G. Jablonski

[http://sites.psu.edu/ninajablonski/wp-content/uploads/sites/10224/2014/02/Jablonski.2012.J.R.Coll.\\_Physicians.Edinb.\\_58ff.pdf](http://sites.psu.edu/ninajablonski/wp-content/uploads/sites/10224/2014/02/Jablonski.2012.J.R.Coll._Physicians.Edinb._58ff.pdf)

##### Approaching Ethical, Legal and Social Issues of Emerging Forensic DNA Phenotyping (FDP) Technologies Comprehensively: Reply to 'Forensic DNA Phenotyping: Predicting Human Appearance from Crime Scene Material for Investigative Purposes' by Manfred Kayser

By: Victor Toorn, Amade M'charek, Matthias Wienroth, Barbara Prainsack, Torsten Heinemann, and Helena Machado

[http://www.academia.edu/20783377/Approaching\\_ethical\\_legal\\_and\\_social\\_issues\\_of\\_emerging\\_forensic\\_DNA\\_phenotyping\\_FDP\\_technologies\\_comprehensively\\_Reply\\_to\\_Forensic\\_DNA\\_phenotyping\\_Predicting\\_human\\_appearance\\_from\\_crime\\_scene\\_material\\_for\\_investigative\\_purposes\\_by\\_Manfred\\_Kayser](http://www.academia.edu/20783377/Approaching_ethical_legal_and_social_issues_of_emerging_forensic_DNA_phenotyping_FDP_technologies_comprehensively_Reply_to_Forensic_DNA_phenotyping_Predicting_human_appearance_from_crime_scene_material_for_investigative_purposes_by_Manfred_Kayser)

##### Topologies of Race: Doing Territory, Population and Identity in Europe

By: Amade M'charek and David Skinner

[http://www.academia.edu/5309310/\\_Topologies\\_of\\_Race\\_Doing\\_territory\\_population\\_and\\_identity\\_in\\_Europe\\_in\\_Science\\_Technology\\_and\\_Human\\_Values\\_2014\\_](http://www.academia.edu/5309310/_Topologies_of_Race_Doing_territory_population_and_identity_in_Europe_in_Science_Technology_and_Human_Values_2014_)

##### Silent Witness, Articulate Collective: DNA Evidence and the Inference of Visible Traits

By: A. M'charek

[http://www.academia.edu/5300150/\\_Silent\\_Witness\\_Articulate\\_Collective\\_DNA\\_Evidence\\_and\\_the\\_Inference\\_of\\_Visible\\_Traits\\_in\\_Bioethics\\_2008\\_](http://www.academia.edu/5300150/_Silent_Witness_Articulate_Collective_DNA_Evidence_and_the_Inference_of_Visible_Traits_in_Bioethics_2008_)

##### Mitochondrial DNA and the Peopling of the New World

By: T. Schurr

<http://www.americanscientist.org/issues/feature/2000/3/mitochondrial-dna-and-the-peopling-of-the-new-world>

##### The Meanings of "Race" in the New Genomics: Implications for Health Disparities Research

By: Sandra Soo-Jin Lee, Joanna Mountain, and Barbara Koenig

[http://heinonline.org/HOL/Page?handle=hein.journals/yjhple1&div=6&g\\_sent=1&collection=journals](http://heinonline.org/HOL/Page?handle=hein.journals/yjhple1&div=6&g_sent=1&collection=journals)



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**1992 Race and ethnicity as biological constructs. *Ethnicity and Disease* 2(2):120-125.**

By: Jackson, F.L.C.

<http://ukpmc.ac.uk/abstract/MED/1467750/reload=0;jsessionid=5ioTcPSFpeffVDAjC57T.o>

**2008 Ethnogenetic Layering (EL): An alternative to the traditional race model in human variation and health disparity studies.**

***Annals of Human Biology* Mar-Apr 35(2):121-144.**

By: Jackson, F.L.C.

<http://informahealthcare.com/doi/pdf/10.1080/03014460801941752> (Winner of 2009 Nick Norgan Award for 2009 Best Article Published in *Annals of Human Biology*.)

**2004 Human genetic variation and health: Ethnogenetic layering as a way of detecting relevant population substructuring.**

***British Medical Bulletin.* 69:215-235.**

By: Jackson, F.

<http://bmb.oxfordjournals.org/content/69/1/215.short>

## ADULT

**Out of Africa: Startling New Genetics of Human Origins**

By: Gary Stix

<http://blogs.scientificamerican.com/talking-back/out-of-africa-startling-new-genetics-of-human-origins/>

**Living Color: The Biological and Social Meaning of Skin Color [for purchase]**

By: Nina G. Jablonski

[https://www.amazon.com/Living-Color-Biological-Social-Meaning/dp/0520283864/ref=sr\\_1\\_1?s=books&ie=UTF8&qid=1471127961&sr=1-1&keywords=living+color+jablonski](https://www.amazon.com/Living-Color-Biological-Social-Meaning/dp/0520283864/ref=sr_1_1?s=books&ie=UTF8&qid=1471127961&sr=1-1&keywords=living+color+jablonski)

**Ted Talk: Skin Color is an Illusion (video)**

by: Nina Jablonski

[https://www.ted.com/talks/nina\\_jablonski\\_breaks\\_the\\_illusion\\_of\\_skin\\_color?language=en](https://www.ted.com/talks/nina_jablonski_breaks_the_illusion_of_skin_color?language=en)

**Sarah Tishkoff (U. Pennsylvania) Part 1: African Genomics: Human Evolution [video]**

<https://www.youtube.com/watch?v=1eoZG956SgY>

**Sarah Tishkoff (U. Pennsylvania) Part 2: African Genomics: African Population History [video]**

<https://www.youtube.com/watch?v=vlp7qyXsPWQ>

**Sarah Tishkoff (U. Pennsylvania) Part 3: African Genomics: Natural Selection [video]**

<https://www.youtube.com/watch?v=eYuHG65Xdw>

**Ethnicity and Race: Making Identities in a Changing World [for purchase]**

By: Stephen E. Cornell and Douglas Hartmann

[https://www.amazon.com/Ethnicity-Race-Identities-Sociology-Paperback/dp/B010WHJGRI/ref=sr\\_1\\_1?ie=UTF8&qid=1471211638&sr=8-1&keywords=Ethnicity+and+Race%3A+Making+Identities+in+a+Changing+World+%28Sociology+for+a+New+Century+Series%29+2nd+Edition](https://www.amazon.com/Ethnicity-Race-Identities-Sociology-Paperback/dp/B010WHJGRI/ref=sr_1_1?ie=UTF8&qid=1471211638&sr=8-1&keywords=Ethnicity+and+Race%3A+Making+Identities+in+a+Changing+World+%28Sociology+for+a+New+Century+Series%29+2nd+Edition)

**1998 Scientific limitations and ethical ramifications of a non-representative Human Genome Project: African American responses.**

***Science and Engineering Ethics* 4:155-170.**

By: Jackson, F.L.C.

<http://www.springerlink.com/content/d1032824381p3382/>



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**1999 African-American responses to the Human Genome Project. Public Understanding of Science, 8(3): 181-191.**

By: Jackson, F.L.C.

<http://pus.sagepub.com/content/8/3/181.short>

**2000 Anthropological Measurement: The Mismeasure of African Americans. Annals of the American Academy of Political and Social Science, 568: 154-171.**

By: Jackson, F.L.C.

<http://ann.sagepub.com/content/568/1/154.short>

## YOUTH

**Introduction to Genetics for Kids (video)**

By: Cara Baldree

<https://www.youtube.com/watch?v=J1wuttlsJTY>

**What is DNA and How Does it Work? (video)**

By: Stated Clearly

<https://www.youtube.com/watch?v=zwibgNGe4aY>

**Mixed-Race Relationships are Making us Taller and Smarter: Children Born to Genetically Diverse Parents are More Intelligent Than Their Ancestors**

by: Victoria Woollaston

<http://www.dailymail.co.uk/sciencetech/article-3146070/Mixed-race-relationships-making-taller-smarter-Children-born-genetically-diverse-parents-intelligent-ancestors.html>

**What Science Says About Race and Genetics**

By: Nicholas Wade

<http://time.com/91081/what-science-says-about-race-and-genetics/>

**What Scientists Mean When They Say “Race” is not Genetic**

By: Jacqueline Howard

[http://www.huffingtonpost.com/entry/race-is-not-biological\\_us\\_56b8db83e4bo4f9b57da89ed](http://www.huffingtonpost.com/entry/race-is-not-biological_us_56b8db83e4bo4f9b57da89ed)

**Do Races Differ? Not Really, DNA Shows**

By: Natalie Angier

<https://partners.nytimes.com/library/national/science/o822oosci-genetics-race.html>



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### ACTIVITIES:

*Continue learning about genes through this website and quiz created by PBS.  
Click on the link below to learn more.*

### **PBS: Our Genes/ Our Choices “What do you know?” Quiz**

[http://www.pbs.org/inthebalance/archives/ourgenes/what\\_do\\_you\\_know.html](http://www.pbs.org/inthebalance/archives/ourgenes/what_do_you_know.html)



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## SAVE THE DATE

NOVEMBER 09 | 06:30PM - 09:00PM

Public Classroom: Geography, Culture and Race

NOVEMBER 16 | 06:30PM - 09:00PM

Public Classroom: Violence and Race

Visit the website: <http://www.penn.museum/sites/pmclassroom>  
for the Public Classroom @ Penn Museum to view the recorded classes as well as  
additional resources, activities, and information.

**THANKS FOR ATTENDING!**



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