Education, Research and Race

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Chair in Pharmaceutical Nanoscience



Overview



- Diversity Dividends
- Education and Race
- Research and Race
- Ethnic diversity and inclusion at UCL
- What you can do

Diverse teams are smarter



They focus more on facts

An ethnically diverse mock jury was less likely to make factual errors when discussing a case

Sommers, 2006, Journal of Personality and Social Psychology, 90, 597-612

They process facts more carefully

Ethnically diverse stock pricing teams were 58% more likely to price stocks correctly

Levine et al, 2014, PNAS, 111, 18524–18529

Diverse leadership promotes innovation



London companies with diverse management are more likely to introduce product innovations when compared to companies with homogeneous top teams.

Nathan and Lee, Economic Geography, 2013, 89: 367, ESRC Funded research

Diverse teams net higher rewards



A 2020 McKinsey report on 1000 companies in 15 countries found that those in the top quartile for ethnic diversity in their executive teams were 35% more likely to be profitable (earnings before interest and tax).

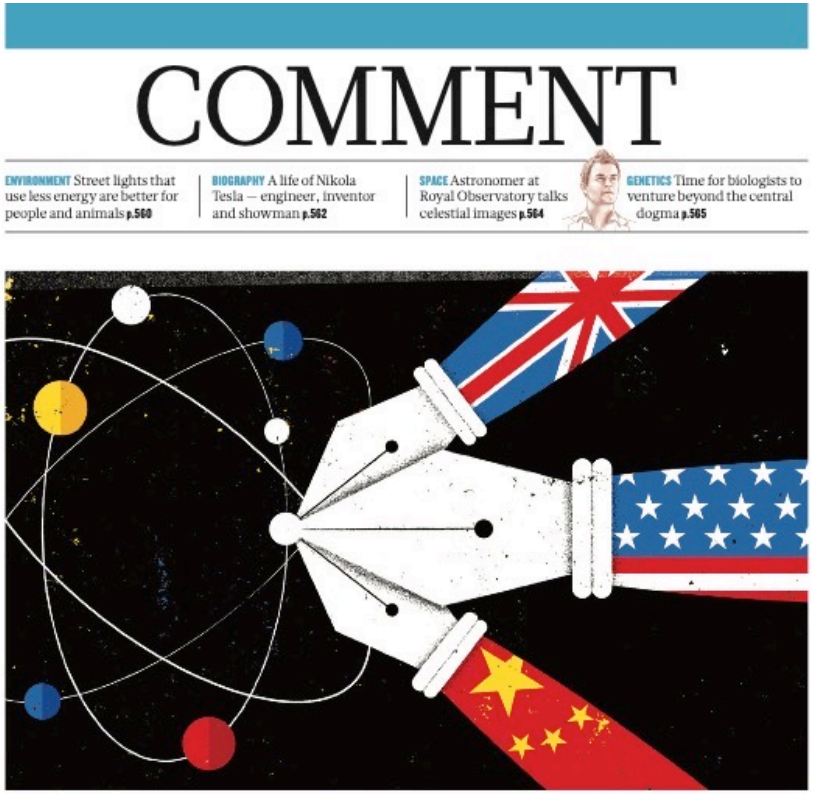
A 2020 McKinsey report on 1000 companies in 15 countries found that those in the top quartile for gender diversity in their executive teams were 25% more likely to be profitable.

The results replicated their 2014 and 2017 findings.

"And, as we have previously found, there continues to be a higher likelihood of outperformance difference with ethnicity than with gender."

https://www.mckinsey.com/business-functions/organization/our-insights/why-diversity-matters

Diverse teams net higher rewards



COMMENT

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ILLUSTRATION BY DALE MURRAY

The fourth age of research

Jonathan Adams analyses papers from the past three decades and finds that the best science comes from international collaboration.

Research has progressed through three ages: the individual, the institutional and the national. Nations competed to be at the cutting edge because this contributed to the wider economy through knowledge, new processes and products.

Today, we are entering a fourth age of research, driven by international collaborations between elite research groups. This will challenge the ability of nations to conserve their scientific wealth either as intellectual property or as research talent[1–3]. Tensions are growing: between the knowledge a country needs to remain competitive and the assets it can exclusively secure, and between the collaborative and domestic parts of the research base. Institutions that do not form international collaborations risk progressive disenfranchisement, and countries that do not nurture their talent will lose out entirely.

To explore the scale of this challenge, I analysed data on research articles and reviews from Thomson Reuters Web of Science between 1981 and 2012. I included papers in a country's tally if one or more author addresses included that country, but no weighting was applied for the number of authors or addresses on each paper. For the 25 million papers I included in my analysis, I calculated the balance of international and domestic research collaboration for established economies (the United States, the United Kingdom, Germany, France, the Netherlands, Switzerland) and emerging ones (China, India, South Korea, Brazil, Poland). I looked particularly at all ▸

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Papers published by groups involving international collaborations were more likely to cited

In the established economies, research papers published by scientists that are all from one country are falling in number

Analysis of 9 million publications found that papers with ethnically diverse authors generated more citations, *"we find that ethnic diversity is the strongest predictor of a field's scientific impact"*

Adams, 2013, Nature 497, 557–560, Alshebli et al, 2018, https://arxiv.org/abs/1803.02282

Inequalities harm populations

UCL

Health and social problems are worse in more unequal countries



Source: Wilkinson & Pickett, The Spirit Level (2009)

THE EQUALITY TRUST

2019/20 – UK Students and a Good Degree?

- 82% of White students obtained a good degree
- 79% of Mixed race students obtained a good degree
- 72% of Asian students obtained a good degree
- 64% of Black students obtained a good degree

- In the UK an award gap of **18%** between Black and White UK students

- At UCL we had an award gap of 7% in 2019
- Award gap not correlated with entry qualifications or parental socioeconomic status

About the TUC

Economic Issues

Equality Issues

Sexual Harassment

Equality Audit

Equality courses

Disability Issues

Gender Equality

Black Workers

Labour Market

Black Workers Conference

Campaigns

Age Equality

Black workers with degrees earn a quarter less than white counterparts, finds TUC

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Black workers with degrees earn 23.1% less on average than white workers with degrees, according to new analysis published by the TUC today (Monday).

The analysis of official statistics shows that a black worker with a degree will earn £14.33 an hour, on average. However, a white graduate will typically earn £18.63 an hour – £4.33 more.

The findings reveal that the pay gap between white and black workers is at its widest at degree level. Black workers with A-levels earn 14.3% less on average than their white counterparts. And black people who leave school with GCSEs typically get paid 11.4% less than their white peers.

The pay gap between all black, Asian and minority ethnic (BAME) workers with degrees and white graduates is 10.3% - the equivalent of £1.93 per hour.

The pay gap with white workers for all groups, regardless of their educational attainment, is 5.6% for BAME workers and 12.8% for black workers.

Employees: gross hourly pay

Employees: gross hourly pay

	White workers	BAME workers		Black workers	
	Pay	Pay	Pay gap	Pay	Pay gap
All workers	£13.45	£12.70	5.6%	£11.73	12.8%
Degree	£18.63	£16.70	10.3%	£14.33	23.1%
A-levels	£11.53	£9.55	17.1%	£9.88	14.3%
GCSE (A* - C equivalent)	£10.33	£8.93	13.6%	£9.15	11.4%
No qualifications	£8.90	£8.25	7.3%	£9.00	-1.1%
Other qualifications	£9.48	£8.88	6.3%	£9.25	2.4%

Awards and the Education Sector







- KEY STAGE 2 (10 – 11 years)
- 80% of Chinese pupils reach the standard
- 75% of Indian pupils reach the standard
- 67% of Black pupils reach the standard
- 67% of White pupils reach the standard

- A LEVELS (18-19 years)
- 24% of Chinese pupils achieve 3 As
- 14% of Indian pupils achieve 3As
- 11% of White pupils achieve 3 As
- 5% of Black pupils achieve 3 As

- DEGREES (21 – 22 years)
- 79% of White students obtain a good degree
- 72% of Chinese students obtain a good degree
- 71% of Indian students obtain a good degree
- 51% of Black students obtain a good degree

An ethnicity award gap exists in the UK

UK Government data 2019

Funding scientists

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UK Research and Innovation

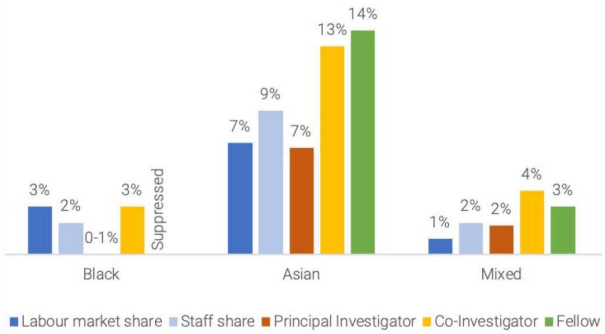
Detailed ethnicity analysis of funding applicants and awardees 2014-15 to 2018-19



3. Within ethnic minorities, the Asian ethnic group forms the largest proportion (two-thirds or more) of applicants and awardees for all three roles for research grants, followed by the Mixed and Black ethnic groups. Figure 2 provides comparisons of ethnic groups share in 2018-19 for each role with staff share and labour market share respectively.

- The share of all three ethnic minority groups as PIs is below their respective academic market share. The share of PIs from the Asian ethnic group is the only one that equals the labour market share.
- As CIs, the share of all three ethnic minority groups is higher than or equal to the staff and the labour market share.

Figure 2: Awardee share by ethnicity (2018-19)



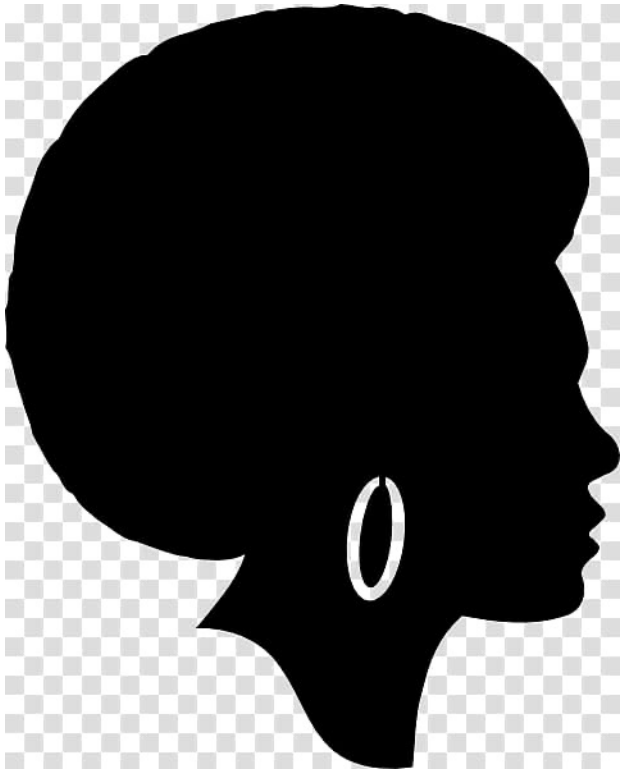
Sources: Je-S; Annual Population Survey, 2018; HESA, academic employment function: Both teaching and research)

Notes:
1. Proportions for counts between 1 and 4 are suppressed.
2. There are approximately 10 Principal Investigators from Black ethnic group. Due to rounding, the proportion of Principal Investigators from Black ethnicities appears as 0-1% of Principal Investigators.
3. Mixed refers to Mixed ethnic group.

4. There are only 60 Fellows in 2018-19 from ethnic minorities although the proportion has increased from 12% in 2014-15 to 18% in 2018-19.

- There are around 45 Fellows from Asian ethnic groups and 10 Fellows from Mixed ethnic groups in 2018-19.
- The proportion of Fellows from Asian and Mixed ethnic groups is higher than the corresponding proportion of academic staff in 2018-19.
- There are fewer than five Fellows from Black ethnic groups in all the years.

Ethnicity and UK Academia



76% of UK academic staff are White
13% of UK academic staff are Black, Asian or Minority Ethnic
10% do not declare or declare as "other"

13% of the UK population are Black, Asian and Minority Ethnic
4% of UK population are Black

83% of UK professors are White
8% of UK professors are Black, Asian or Minority Ethnic
0.7% are Black

46% of UK academics are female
0.2% of UK professors are female and Black

Black female academics are less likely to be promoted and less likely to be making the decisions

2019 HESA data
2011 Census data

Ethnicity, Gender and UK Academia

20% of White academics earn above £60,000

25% of male academics earn above £60,000

15% of female academics earn above £60,000

10% of Black academics earn above £60,000

Black and female academics find it hard to attract higher salaries

2019 HESA data
2011 Census data

Diversity in UK Education and Research

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- Diverse decision making leads to superior outcomes
  - A race equality strategy is needed across the whole education sector
  - Schools should be rewarded for eliminating ethnicity award gaps
  - The Office for Students have a target - eliminate the awarding gap between Black and White students by 2024/2025
  - Office for Students Access agreements should reward universities that meet the award gap target
  - Annual race equality data should be published by the research and education sector

UCL Approach – Articulate a value added case

Activities to promote race equality

- Race Equality Charter application 2015 and 2020

https://www.advance-he.ac.uk/equality-charters/race-equality-charter/members

- Annual data sharing roadshow with Faculties and Professional Services Departments: 2018, 2019 and 2020 resulting in public Deans'/ Directors' pledges

https://www.ucl.ac.uk/equality-diversity-inclusion/equality-areas/race-equality/deans-and-professional-services-directors-race-equality-pledges-2020

- Candid UCL-wide conversations on race inequality: UCL Town Hall on race resulting in the Race Equality Implementation report

https://www.ucl.ac.uk/news/2020/jun/town-hall-conversation-about-race-ucl-lived-experience-friday-19-june-2020-10am-12pm
https://www.ucl.ac.uk/human-resources/news/2021/jan/race-equality-implementation-group-interim-report

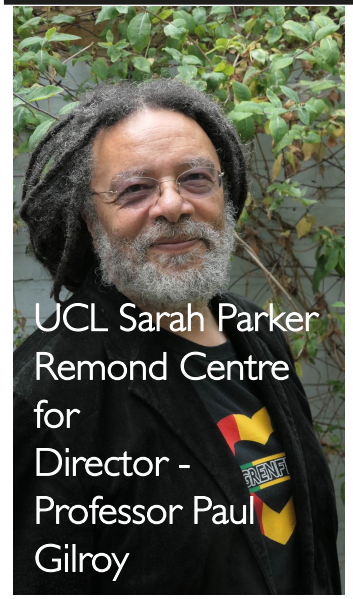
- Challenge historical links with racism – UCL Eugenics Inquiry

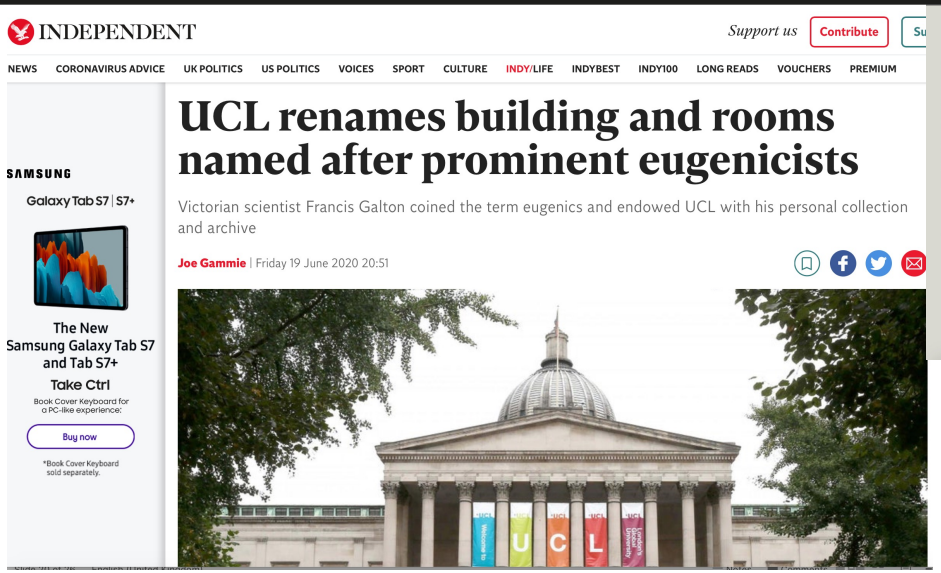
https://www.ucl.ac.uk/provost/inquiry-history-eugenics-ucl

- Acknowledge racism – UCL statement on race

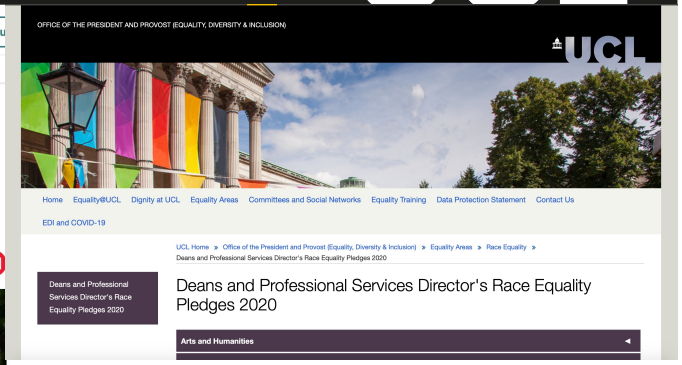
https://www.ucl.ac.uk/equality-diversity-inclusion/equality-areas/race-equality/ucls-statement-race

Achievements and Impacts





UCL Eugenics Enquiry



Annual Dean/ Director pledges on race equality

Increase in the proportion of Black, Asian and Minority Ethnic staff at the top 4 grades: increased from 18%-20% over 4 years

4 out of 11 faculties had a year on year drop in the Awarding Gap by 2019
Awarding Gap virtually abolished in 2020

Women in leadership positions have doubled over 3 years.

And Finally

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Physician–patient racial concordance and disparities in birthing mortality for newborns

Brad N. Greenwood[a,1,2], Rachel R. Hardeman[b,1], Laura Huang[c,1], and Aaron Sojourner[d,1]

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Edited by Christopher W. Kuzawa, Northwestern University, Evanston, IL, and approved July 16, 2020 (received for review August 2, 2019)

Recent work has emphasized the benefits of patient–physician concordance on clinical care outcomes for underrepresented minorities, arguing it can ameliorate outgroup biases, boost communication, and increase trust. We explore concordance in a setting where racial disparities are particularly severe: childbirth. In the United States, Black newborns die at three times the rate of White newborns. Results examining 1.8 million hospital births in the state of Florida between 1992 and 2015 suggest that newborn–physician racial concordance is associated with a significant improvement in mortality for Black infants. Results further suggest that these benefits manifest during more challenging births and in hospitals that deliver more Black babies. We find no significant improvement in maternal mortality when birthing mothers share race with their physician.

racial bias | birthing outcomes | concordance | mortality | health care

approaches to address this pressing social issue. Furthermore, to the extent that newborns cannot verbally communicate with their physician, we are able to observe the effects of concordance without trust or communication issues affecting the patient–physician relationship. Inasmuch as prior research has struggled to disentangle the mechanisms behind concordance's effect (10, 26), the setting allows us to explore concordance in the absence of one invoked mechanism—communication. Thus, if concordance effects manifest, we are able to rule out communication as the exclusive mechanism.

Research posits that racial concordance between a newborn and their physician may mitigate disparities for at least two reasons. First, research suggests concordance is not only salient for adults. Indeed, a growing body of literature explores the question of whether actors exhibit different levels of bias toward both children and adults. Wolf et al. (27), for example, examine whether adults' spontaneous racial bias toward children differs

After examining 1.8 million hospital births Greenwood found that when Black new-borns are cared for by Black physicians, the mortality penalty they suffer, as compared with White infants, is *halved*.

Strikingly, these effects appear to manifest more strongly in more complicated cases, and when hospitals deliver more Black new-borns.

Greenwood et al, 2020, PNAS, 117, 21194