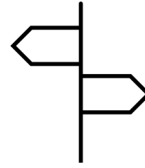


Implicit Bias in Experimental Research

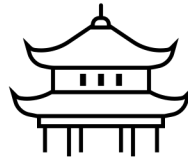
Kaila Yallum (she/her)

Universität Bern

Implicit Bias

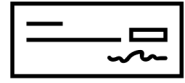


Implicit bias is automatic and unintentional, yet affects our judgements and decisions.

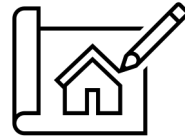


It is shaped by our surrounding environment.

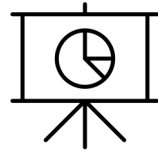
Implicit Bias in Science



Funding & Resources



Experimental Design



Interpretation of Results



Peer Review

As scientists, we are contributing to and we are subject to implicit bias.

Context



[HOME](#) > [SCIENCE](#)

There's A ... Winning T

Joe Weisenthal Apr 20, 2014

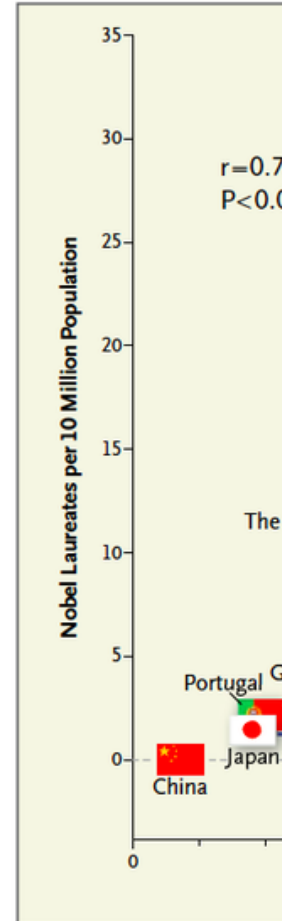


Figure 1. Correlation between
Laureates per 10 Million Population.

The chocolate chart actually comes from a New England Journal Of Medicine paper published in 2012 called: Chocolate Consumption, Cognitive Function, and Nobel Laureates.

N Engl J Med (2012) 367:1562-1564

Chocolate And

The paper isn't a joke. It was written by Franz H. Messerli, MD. A full ungated version of it can be read [here](#).

Messerli writes:

Since chocolate consumption could hypothetically improve cognitive function not only in individuals but also in whole populations, I wondered whether there would be a correlation between a country's level of chocolate consumption and its population's cognitive function. To my knowledge, no data on overall national cognitive function are publicly available.

Conceivably, however, the total number of Nobel laureates per capita could serve as a surrogate end point reflecting the proportion with superior cognitive function and thereby give us some measure of the overall cognitive function of a given country.

Darwin on Sexual Evolution

In Victorian England, Darwin included male superiority in his theory of sexual evolution.

- Men must be smarter, stronger, and more talented to attract mates.
- Women evolve by consequence of male competition, and even still they remain evolutionarily a step behind.

Sexual Differences

“Male brains ‘systemize’ and are driven to understand the basic rules and laws that govern a system. Female brains ‘empathize’ and are driven to understand and predict emotions in another person.”

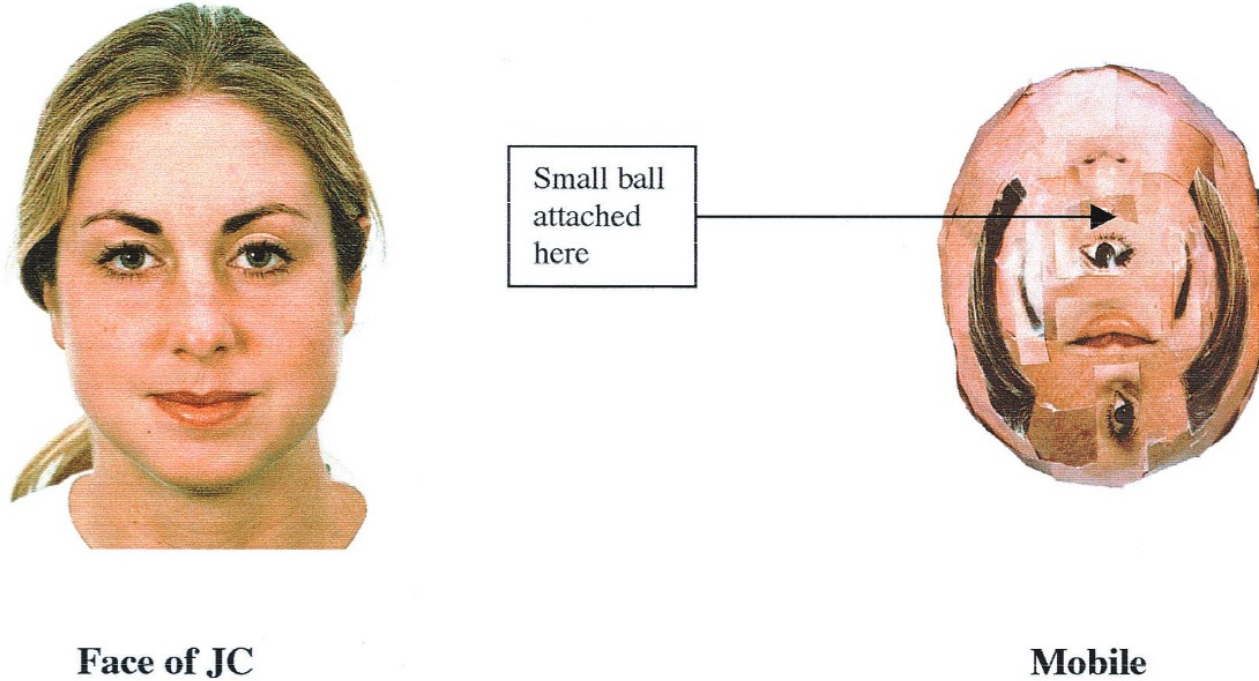
Males:

**Systemetizing
Logical**

Females:

**Empathetizing
Social**

Baron-Cohen on Sexual Dimorphism



154 babies 40% showed any preference

51 neonates' data was discarded due to "extended crying, falling asleep, or fussiness" (33% of the collected data)

Empathizing-Systemizing

Ruben Gur

Biological evidence of E-S theory

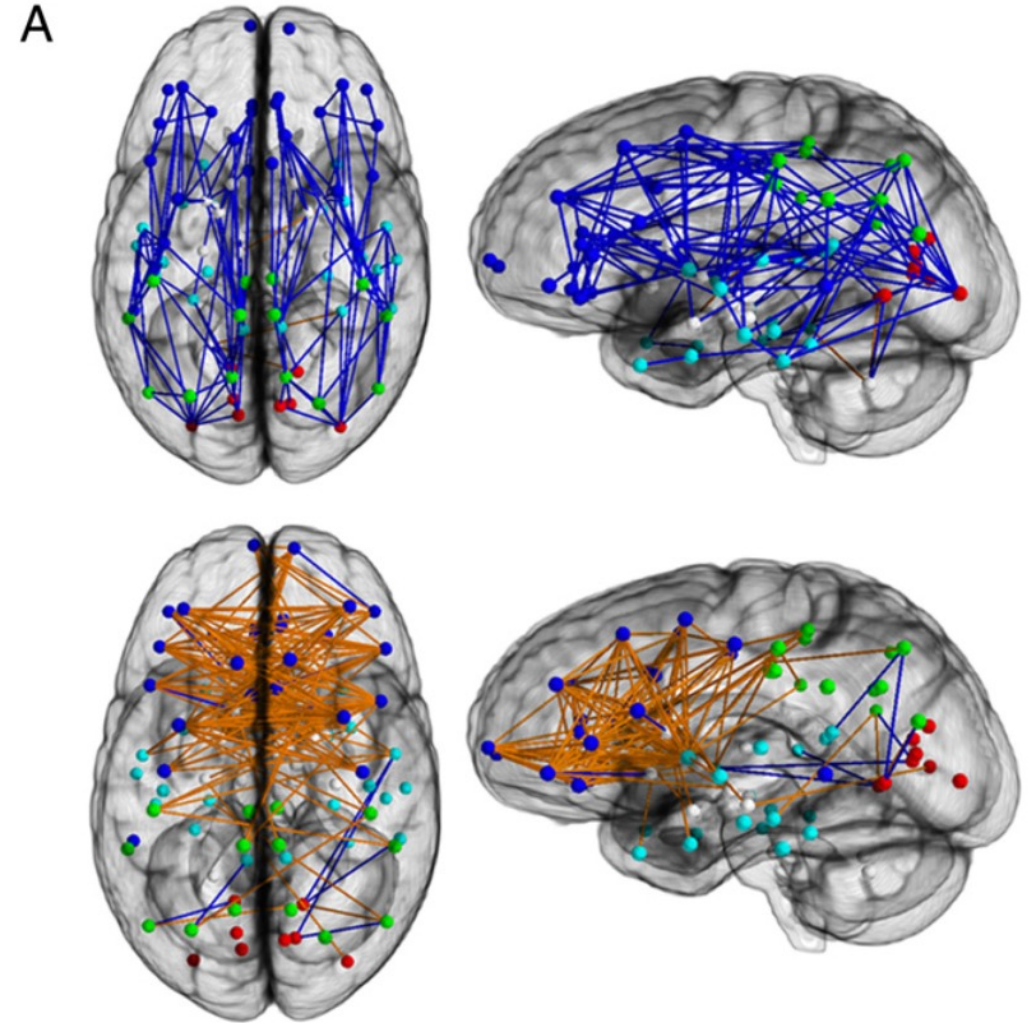
Studied adult brains with binary categorization

Intra-hemisphere connections are associated with systemizing, male behaviors

Inter-hemisphere and front of brain connections are associated with multitasking, and emotional, social, female behaviors.

Fail to mention the criticisms of brain imaging

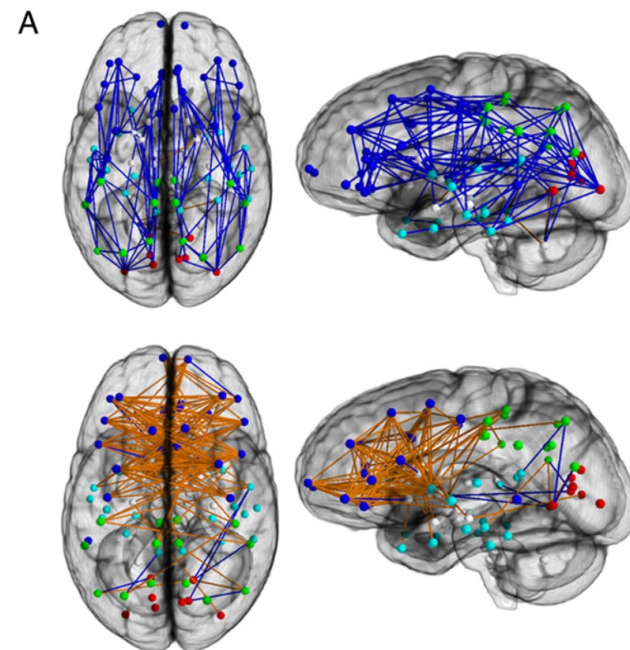
Fail to discuss the effects of neuroplasticity



E-S Theory



news wise



The Philadelphia Inquirer

sky

news

The Guardian

BOSTON
Herald

CTV
NEWS

PBS
NEWS
HOUR

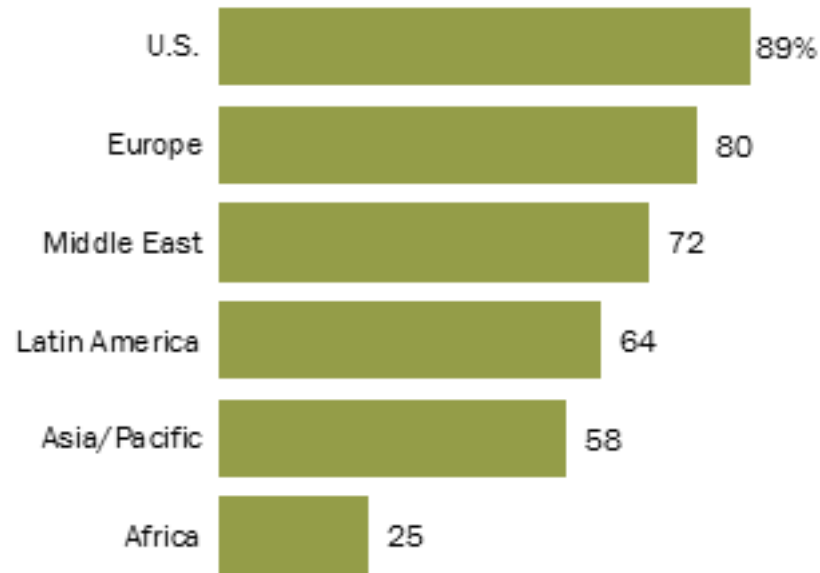
ScienceDaily®

Your source for the latest research news

Implicit Bias in AI

Internet users predominate across regions, except in Africa

Regional medians of adults who use the internet at least occasionally or report owning a smartphone



Note: Percentages based on total sample. Russia and Ukraine not included in Europe median.

Source: Spring 2015 Global Attitudes survey. Q70 & Q72.

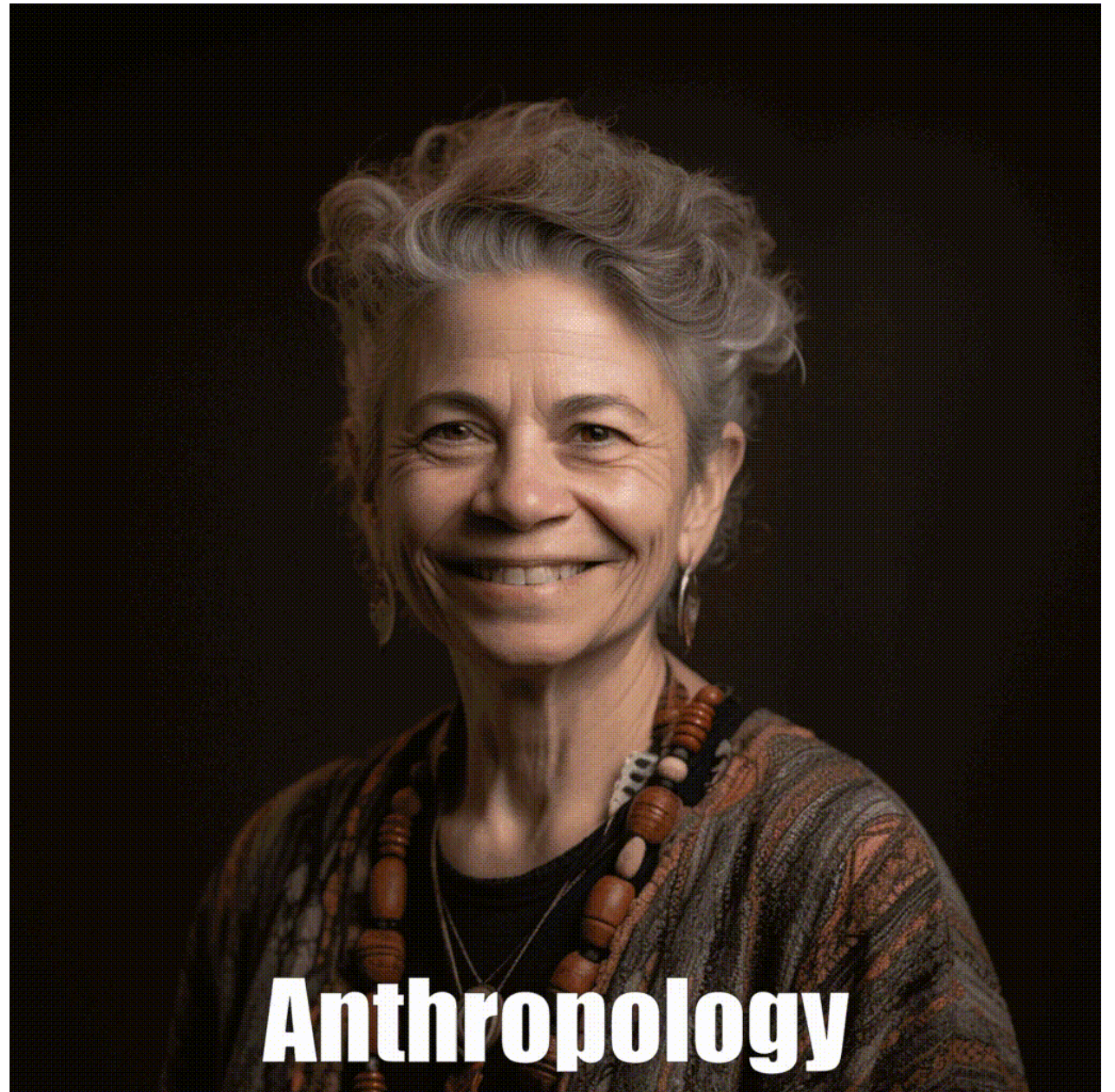
PEW RESEARCH CENTER

Men are more likely to use the internet than women

Internet usage is largely biased by age, economic standing, and education



Implicit Bias in AI



[Original Post](#)

UniBe SCNAT Ethics

Poll Insights



Do you feel like you could identify with any of the professors from the AI generation?

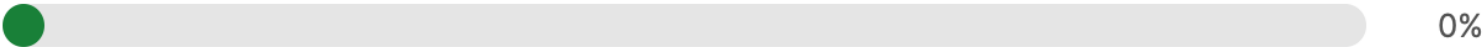


Do you feel like you could identify with any of the professors from the AI generation?

Share

Multiple Choice Poll 1 vote 1 participant

Yes - 0 votes



No - 1 vote



Implicit bias in science

As scientists, we are contributing to and we are subject to implicit bias.

①

Bring awareness to bias

②

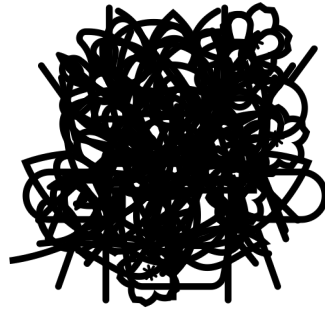
Make active choices to challenge bias

Bring awareness to bias

1

Side note:

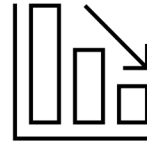
This is the slide with the experiment to label bugs and flowers either 'ugly' or 'pretty'



The time taken to sort concepts into categories reveals how easy it is for your brain to associate the concepts.

Make active choices to challenge bias

2



From 2007-2020 implicit bias based on sexual orientation has decreased by 64%



This effect comes from social movements.

Start now!

As scientists, we are contributing to and we are subject to implicit bias.

Implicit Association Test (IAT) from Harvard



Baron-Cohen on Sexual Dimorphism

Female superiority in sociability has been documented in humans. Thus, girls and women show greater eye contact than age-matched males (Hall, 1985); superior social understanding and sensitivity to emotional expressions (Baron-Cohen, Jolliffe, Mortimore & Robertson, 1997; Baron-Cohen, O'Riordan, Stone, Jones & Plaisted, 1999; Happe, 1995; Rosenthal, Hall, DiMatteo, Rogers & Archer, 1979); and better comprehension of social themes in stories (Willingham & Cole, 1997). It is unclear if this is the result of differences in styles of parenting towards the sexes or of biological factors (Hines & Green, 1991; Kimura, 1987).

Baron-Cohen on Sexual Dimorphism

Here we demonstrate beyond reasonable doubt that these differences are, in part, biological in origin.

There are 4 reasons for suspecting that sexual dimorphism in sociability is biological. (1) The amount of eye-contact shown by infants at 12 months of age is inversely correlated with prenatal testosterone (Lutchmaya, Baron-Cohen & Raggett, submitted), and prenatal testosterone is higher in males than females. (2) Children with the neurogenetic condition of autism show reduced attention to people's faces and eyes (Leekam, Baron-Cohen, Brown, Perrett & Milders, 1997; Phillips, Gomez, Baron-Cohen, Riviere & Laa, 1996; Swettenham et al., 1998). This is relevant because (3) Autism is predominantly a male condition (APA, 1994), suggesting their defining social impairment is sex-linked in some way. (In high-functioning

Baron-Cohen on Sexual Dimorphism

Irrespective of the biological basis of the sexual dimorphism in sociability, at a psychological level strong sex differences are found in social (folk psychology) and nonsocial (folk physics) intelligence (Baron-Cohen, 2000a; Baron-Cohen, 2000b; Baron-Cohen & Hammer, 1997).

Of the 18 references, 9 of them are from Baron-Cohen himself.