

Agenda

Theme 3:
*Science aligns
with power*

1. Administrative
2. Today's readings
3. Scientific objectivity
4. Small-group discussions

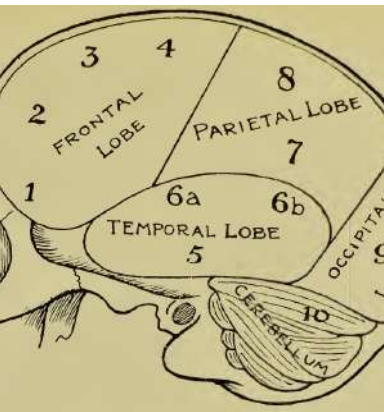
Notes

Group sign-up

- ⋮ Remember to sign up for a group using the “Group sign-up” tab on Teams or <https://kutt.it/lCuc22>
- ⋮ *Students who do not sign up for a group before September 19 will be randomly assigned to a group*

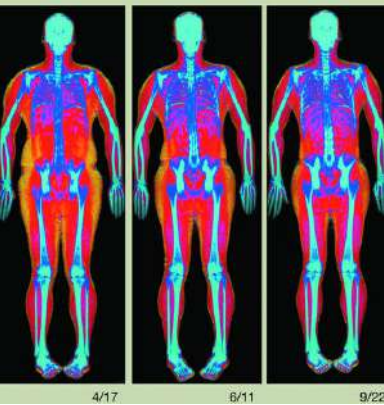
Final project details on Thursday

- ⋮ I will talk about the format, grading, and options for the final project on September 14
- ⋮ <https://soci325.netlify.com/pages/poster.html>



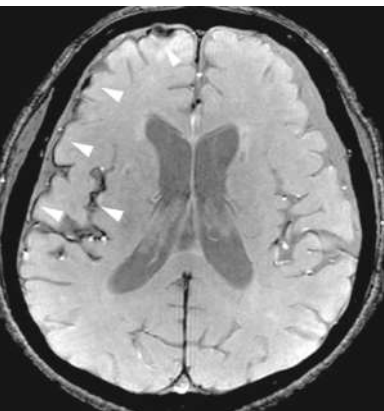
Gould (1981) *Measuring Heads* — required

- ∴ Case study of 19th century craniologist Paul Broca
- ∴ Examines the role of objectivity and numerical measurement in supporting racial, gender, and class hierarchies



Maintenance Phase (2021, podcast) *The Body Mass Index* — optional

- ∴ Discussion of the history of the Body Mass Index (BMI) as a health measure
- ∴ Links BMI to gender, race, class, and body politics



Daston and Galison (2010), *Epistemologies of the Eye* — optional

- ∴ History of scientific ideals and the concept of objectivity
- ∴ Discusses different forms of objectivity, and the role of interpretation in contemporary ideals of objectivity

Scientific objectivity

a brief history

Objectivity

In theory:

- ‡ Removing the influence of personal bias, opinions, or feelings.
- ‡ Knowledge that exists ***apart from*** human influence.

In practice:

- ‡ Represents one ***ideal*** to strive toward.
- ‡ Many techniques:
Mechanization, replication, peer review, ...
- ‡ These methods can be ***deceptive*** (e.g. Gould 1981; Benjamin 2019).

Historically:

- ‡ Scientific objectivity was a 19th-century invention (Daston & Galison 2010).

Truth to nature

Pre-objectivity

- ∴ In Daston & Galison's (2010) account, 18th-century scientists had a different ideal for representation.

Ideal types

- ∴ The job of a scientist was to characterize objects in the world, emphasizing regularity.
- ∴ Idiosyncrasies should be ignored, and description should emphasize "the characteristic, the essential, the universal, the typical" (ibid., p. 20).



Illustration of *Lagerstroemia speciosa* from 1795 publication *Plants of the coast of Coromandel*.

Mechanical objectivity

New ideal of seeing

- With the advent of photography, scientists adopted mechanical objectivity as new 'epistemic virtue.'

Minimizing human involvement

- Mechanical objectivity aimed to take people out of the process of representing nature.

"To be objective is to aspire to knowledge that bears no trace of the knower" (Daston & Galison 2010, p17)

- Idiosyncrasy should be **emphasized and catalogued**.
- Photography, impartial measurement, and blinded observation are prioritized.



Alphonse Bertillon's photographs of the ears of criminals (circa 1900).

Trained judgement

Expert intervention

- ∴ According to Daston & Galison, a new epistemic virtue of “trained judgement” arose in the early 20th century.

Trained interpretation of data

- ∴ Cataloguing mechanical representations is not enough for valid, scientific knowledge.
- ∴ Trained experts, familiar with the theories, mechanisms, and methods in a domain should provide interpretation.
- ∴ ‘Subjective’ intervention is necessary to make sense of ‘objective’ records.



Discussion

In person



Form groups of 4–5

- ⋮ At tables or outside of the classroom. Join a Teams room for your table

Online



Form groups of 4–5

- ⋮ Choose a "discussion room" channel on Teams

Small-group discussions:

- ⋮ Choose **one facilitator** who will keep the discussion focused and make sure everyone is able to participate.
- ⋮ Choose **one secretary** who will take notes and summarize the group's responses for submission.
- ⋮ Download Word Doc (linked from syllabus) and type your names/roles at the top
- ⋮ Type your responses directly in the document and submit one document per group

Notes:

- ⋮ You do not need to reach consensus on the questions. Your write-up should mention the different points your group thought were relevant. **One or two paragraphs** worth of text per question should be sufficient.
Please avoid bullet-point format.
- ⋮ You can discuss the questions in **any order** you like, and you do *not* need to respond to all of them. Read over them before you begin!

Next class

Required reading

⋮ **Wolfe (2018)**

Introduction to

*Freedom's laboratory: the Cold War
struggle for the soul of science*

Image credit

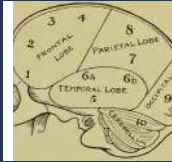


Plate 35 from Hollander (1902), *Scientific Phrenology* via archive.org

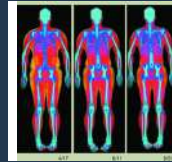
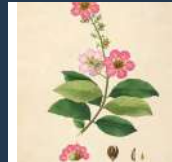


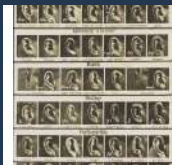
Image by Hologic Inc, via [The Wall Street Journal](http://TheWallStreetJournal.com)



MRI from [Hongwei et al. \(2015\)](#).



Print from [Plants of the coast of Coromandel](#)



Photos by Alphonse Bertillon, via [The Metropolitan Museum](#)

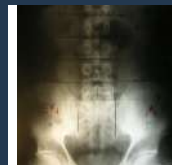


Photo by Michael Dorausch via planet1.com